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Andrew Foster.

13th Jan^y 1835.

ON

INDIGESTION AND COSTIVENESS,

AND

THE USE OF LAVEMENTS.

REFERENCES TO THE FOLLOWING PAGE.

Observe that the Alimentary Canal is marked with Capital Letters.

- A** Entrance to the Œsophagus, at the back part of the mouth.
 - B B** Œsophagus, running down behind the heart, and perforating the diaphragm.
 - C** Stomach, with a short dotted line at the *entrance*, called the Cardia, and also a short dotted line at the lower *opening*, or outlet, denominated the Pylorus, at which place is a valve.
 - D D** The Duodenum, or first of the small intestines.
 - E E E** The convolutions of the Jejunum.
 - F F F** The convolutions of the Ileum.
 - +** Where the Ileum enters the Cæcum, or first great gut, at which place is a valve, or contracting muscle.
 - G** The Cæcum.
 - H** Ascending portion of the Colon.
 - I** Transverse arch of the Colon.
 - J** Descending portion of the Colon.
 - K** Sigmoid flexure of the Colon.
 - L** The Rectum, or last great Intestine, lost in the dark shading of the pelvis, and terminating at the anus.
- | | |
|---|---|
| } | The bands which draw these intestines into lobes, or bags, are described through their course by a dark line. |
|---|---|
- a a** The Lungs.
 - b** The Heart, divested of its pericardium, or covering.
 - c c** The Diaphragm, or separation between the thorax and abdomen.
 - d** The Liver, placed behind the stomach instead of before, in order that the position of the stomach might be better seen.
 - e** The Gall-bladder, situated under the liver, but in the following plate is shown in *front* of the liver, that its situation may be better seen.
 - f f f f** Flaps of skin and muscle, cut from the thorax and abdomen, and thrown back to show their contents.
 - g** The Spleen: *use unknown*.
 - h** The Pancreas, marked by a dotted line to show its situation under the stomach.
 - i i** The Ribs sawn off.

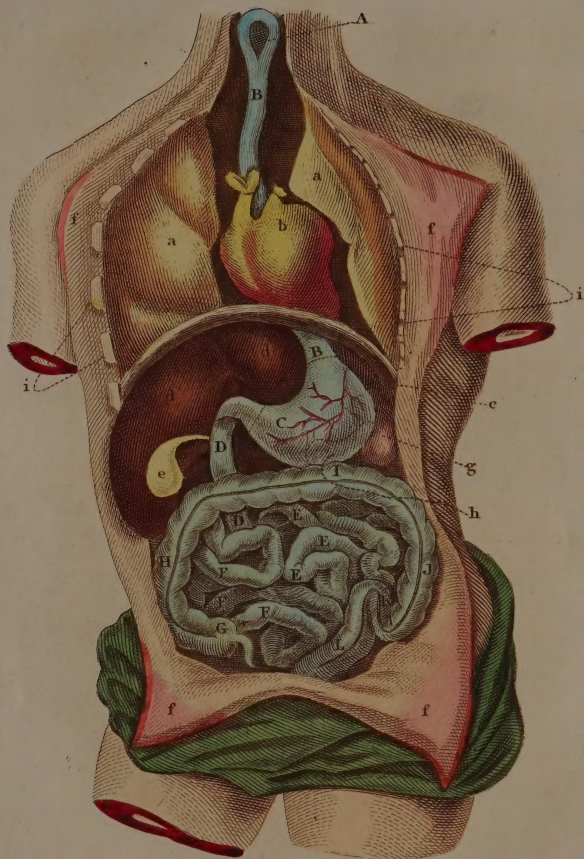


Diagram of the appearance of some of the principal organs contained in the human body; but more especially intended to display the course of the alimentary Canal, for which purpose the Stomach is transposed, and its situation is, therefore, represented before, instead of behind the liver, as is also the Gall bladder.

ON
INDIGESTION AND COSTIVENESS;

A SERIES OF

HINTS TO BOTH SEXES,

ON THE

IMPORTANT, SAFE, AND EFFICACIOUS MEANS OF RELIEVING
DISEASES OF THE DIGESTIVE ORGANS BY

LAVEMENTS;

WITH

DIRECTIONS FOR THE SELECTION AND USE OF
APPARATUSES FOR THEIR ADMINISTRATION:

TO WHICH ARE ADDED,

Observations on the mode of preserving Health and pro-
longing Life, by Air, Exercise, Sleep, Clothing,
Dieting, &c.

*Some general Remarks, and useful Hints, on the Cause,
Prevention, and Cure of Obesity:*

ALSO

ONE HUNDRED USEFUL FAMILY PRESCRIPTIONS:

The whole illustrated by coloured Copper-Plate ENGRAVINGS,
representing the internal Organization of MAN.

By EDWARD JUKES, ESQ. SURGEON,

INVENTOR OF THE STOMACH-PUMP.

FOURTH EDITION:

LONDON:

JOHN CHURCHILL,

(SUCCESSOR TO MESSRS. CALLOW AND WILSON,) 16, PRINCES STREET, SOHO.

—
1833.

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INDIGESTION AND CONSTIPATION

BY J. J. DUFFIN

Author of 'The Treatment of Indigestion and Constipation' and 'The Treatment of the Stomach and Bowels'

LONDON

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WILLIAM CLOWES

Printed by William Clowes, Duke Street, Lambeth.

1871

EXTRACTS FROM VARIOUS PUBLICATIONS

IN COMMENDATION OF THIS WORK.

“ Mr. JUKES’ little work on Indigestion and Costiveness has arrived at a Third Edition. We repeat our recommendation of it. It is a small Buchan, and carries with it a great deal of wholesome advice and rational information, as well as a number of well composed Prescriptions for Pills, Draughts, &c., which save both the trouble and expense of a Doctor in slight cases.”—*Spectator, December 11th.*

“ The lovers of health, rather a numerous class, we calculate, in this little volume, written by Mr. JUKES, the Inventor of the Stomach-Pump, will find much to interest them. The valuable advice it offers will save many an appeal to a Physician, *and probably many a life.* The course the Author recommends (which we cannot minutely describe) will afford the martyr to indigestion relief by a mode of which thousands up to this moment have never heard. We give this Book our strongest recommendation.”—*Sunday Times, December 17th.*

“ This little work has already reached the Third Edition, and that is, perhaps, an unexceptionable proof not only of its popularity, but also of its merit. We have dipped into some portions of it, and have had reason to be pleased both with the manner in which the Doctor delivers himself of his opinions, and of the good sense by which they are characterized. This work is amply entitled to the attention of the public, and contains many valuable recipes for the cure of indigestion.”—*Morning Advertiser, December 9th.*

"Mr. JUKES writes upon a subject which is worthy the best attention of all those who wish to avoid many of the miseries which flesh is heir to; this book, in fact, is a Treatise on Lavements, the utility of which is but indifferently understood in this country. It should be perused by all persons, whether in or out of health—on the subject on which it treats it is impossible that we can be too well informed."—*Satirist, December 25th.*

"This little volume is entirely devoted to the popular reader, and is judiciously intended to promote the more general introduction of Lavements in the cure and relief of Diseases of the Digestive Organs; this method of treatment is extensively pursued on the Continent, and it is only from a species of false delicacy, which prevents its more frequent employment in this country, particularly by our female population, who have only recourse to it in cases of extreme danger. The observations of Mr. JUKES cannot be too generally read by the heads of families, as the hints they contain are of the utmost service towards promoting the health of mankind."—*Journal of Literature and Science, December 30th.*

"Mr. JUKES deserves the esteem of his country for the valuable invention of the Stomach-Pump. The nature of the volume before us, however important to the best interests of society, is still not exactly susceptible of a public explanation; but Mr. JUKES proposes a very simple remedy for a very serious class of complaints; he enforces his plans by the soundest arguments, and some coloured plates in the work will very familiarly set before the eyes of his readers the anatomical process, by a knowledge of which he seeks to render his system of treatment intelligible to all."—*Monthly Review, January.*

"A work by the inventor of the Stomach-Pump, which we cannot well analyse here, but which we can recommend to persons of both sexes, as well meriting their serious attention; it contains matter which is important on a subject little attended to in this country, though abroad it is familiar to persons of both sexes. Mr. JUKES deserves well of society for the information he has given in this book. He is both an

ingenious mechanic, and a man of sound professional abilities."—*Metropolitan, January.*

"A very sensible and useful little book, by the ingenious inventor of the Stomach-Pump, which has saved so many lives. We recommend it to all families. There is no quackery in it—no affectation of enabling people to do without medical assistance; but much salutary suggestion, a timely attention to which may greatly conduce to the preservation of health."—*Monthly Repository, January.*

"We have a copy of Mr. JUKES' little book on Indigestion and Costiveness, accompanied with his mechanical apparatus called the Clyisma-Duct, or *Clysoire*, for the administration of Lavements and medicated Injections. The fact that indigestion, the forerunner of costiveness, is induced more by a want of action in the intestines than in the stomach, and that medicine can be conveyed into the system with better advantage through the former than the latter medium, clearly shows the vast utility of injections. Mr. JUKES (who is already known to his profession as the inventor of the Stomach-Pump, which has saved thousands from an untimely death,) handles this subject in a masterly manner; he displays great medical science, and gives such valuable information as will amply repay every one the trouble of reading it. Health is a blessing, and those who wish to prolong it, will cultivate some acquaintance with the author's writings and the usefulness of his invention—the Clyisma-Duct."—*English and Foreign News, or Jersey and Guernsey Advertiser, Nov. 30th, 1832.*

"This valuable work, which has reached the Third Edition, abounds in many excellent hints on the safe and efficacious means of relieving diseases of the digestive organs, with judicious observations on the preservation of health and the prolongation of life. It contains many useful prescriptions, and is well adapted for the information of families."—*Christian Advocate, April, 1833.*

"This very useful treatise is written in an easy and familiar style, that cannot fail of recommending it to the general reader. Mr. JUKES, striking at the root of all evils that

"flesh is heir to," has compiled a perfect Manual of Domestic Medicine, for which the sincere thanks of every valetudinarian will be tendered to him. He points out in clear and concise language the means to be adopted for the prevention and cure of a disordered stomach ; and, considering the wide range that such a subject affords to his remarks, few professional men can be more justly complimented upon the extent and value of their labours for the public health."—*United Kingdom, April, 1833.*

PREFACE.

INDIGESTION is, perhaps, the most comprehensive word used to signify a diseased state,—for it relates not only *directly* to affections of the alimentary passages themselves,—but *indirectly* also to most of the various diseases to which human beings are subject.

It is a term, which (as applied to disease) is more familiar; yet generally less understood, than any other.

It has occupied the attention of medical men of every age and nation,—from the early days of Hippocrates (the Father of Physic) down to the present time, physiologists have devoted their lives and labours to its investigation and cure; and the results of these are to be found in the numerous volumes which have been already written upon this subject.

But the reader will naturally say—then why write another work upon a disease for which so much has been already said and done? My answer is simply this, that notwithstanding the numerous volumes on the subject, the disease prevails as generally as

ever; and more are suffering from its effects in the present day than at any former period since the creation of man. Much yet, therefore, remains to be done; much error to be exposed, and many false notions to be corrected or eradicated. The vaunted scientific systems of cure hitherto advocated for this disease, have been supported under the unenlightened prejudices of by-gone times, or from a bigoted attachment to old remedial means, the powers of which have not been commensurate with the fearful violence of a disease whose spread (aided perhaps by the luxurious style of living in modern times) has increased with ten-fold rapidity within the few past years. Therefore is it a subject still worthy of, and deserving the attention of those whose minds, unshackled by prejudice or professional etiquette, will *boldly* put forth a work which, freed from all false theories, and technicalities of language, is adapted, by the simplicity and truth of its diction, to the perusal and comprehension of the proudest and lowliest reader in the land. The author has used the term “boldly,” and advisedly so; being well aware that the promulgation of a system at once so useful, efficacious, and so well calculated (by the most simple and easy means) to prevent, and cure those disorders dependent upon *indigestion* and its consequences, as the one

recommended in the pages of *this book*, cannot continue to receive that universal assent and support which have been hitherto so generously granted to it, without altering, in a great measure, that line of conduct which the medical practitioner of the present day observes to his *patients*, by pointing out to the latter, the absurd folly of taking nauseous and, at best, *pernicious drugs*, for the relief of that disease which, when unaided by other means, they seldom cure, whilst a remedy simple, sure, and efficacious, (relieving even the worst cases,) is hid from them by those who (members of a gentlemanly and honourable vocation, as they affect to be,) do but at best pander to the ravages of a disease which they profess to, but do not or cannot, cure.

Considerations such as these, first led the author to present the public with the first edition of his work about two years since; larger editions have since been published, and he now offers this edition, revised, enlarged, and otherwise very considerably improved;—trusting that the practical investigations and improvements in his system of cure will be found of increased benefit to all who labour under the painful effects of *indigestion*, and at once rescue the sufferer from the trammels of blind ignorance and prejudice.

The leading object of the author, in the following pages, will be to show that the cure of *indigestion*, and the *diseases consequent upon it*, may be effected by a judicious system of *dieting*, and by the substitution of *simple Lavements* for *nauseous drugs*; which system combines and possesses all the useful properties of aperient medicines.

The benefit derived from the use of injections has been known and understood since the earliest ages; and their simplicity and utility are no sooner seen than acknowledged, superseding at once the use of all drugs, by preventing, as well as curing, the disease.

The "march of intellect," and the rapid diffusion of useful and valuable knowledge amongst all classes of the community in the present day, mars greatly the efforts of those, who would fain curb the understandings of all who are capable of receiving improvement and instruction; and the time is not far distant when the "General principles of Anatomy and Physic" will form a necessary part of the education of every gentleman, sufficiently so to enable them to understand the general structure of the human frame, and the complicated organization and functions of those parts engaged in the purposes of life; teaching them how to regulate their habits, that they may prevent, as much as possible, the inroads and fatality of disease.

Before the importation of *drugs* from *foreign countries*, the ancient physicians prescribed *simple remedies*, a knowledge of which they learnt from *nature*.

“ Thus, then, to man, the voice of nature spake—
Go, from the creatures thy instruction take ;
Learn from the birds, what food the thickets yield ;
Learn from the beasts, the physic of the field :
Thy arts of building, from the bee receive ;
Learn from the mole to plough, the worm to weave ;
Learn from the little nautilus to sail,
Spread the thin oar, and catch the driving gale.”

Pope.

Remedies, for the cure of diseases, require no mystery, they were made for man, and are as natural to him as food to his stomach. The use of emetics was taught by dogs, who when their stomachs are gorged, eat rough grass, to irritate their throats and cause them to be sick ; in the same manner do *we* tickle the throat to excite vomiting.

Pliny records, that the art of *bleeding* was taught by the hippopotamus, which being an animal of luxurious habits, and disposed to plethora, occasionally goes down to the sea-side, and sits or presses down its hinder parts upon the stubble of reeds, or the sharp-cut points of the willow, and thereby *draws blood* from the *veins*. The same author also goes on to describe that the use of *glysters* was taught by the *stork*, who may be observed

to inject water into its bowels by means of its long beak.

“Simile quiddam et volucris in Egypto monstravit, quæ vocatur ibis: rostri aduncitate per eam partem se perluens, qua reddi ciborum onera maximè salubre est.”

The simple *art of medicine* being thus taught as it were by nature herself; the *remedies* which she supplies must be of necessity more efficacious than the many hundred varieties which fill the bottles and drawers of an apothecary's shop; and when it is remembered that “the cattle on a thousand hills” are fed, supported, and kept free from sickness and disease by the cunning hand of nature herself, and the structure of their frames not differing essentially from that of *man*, it follows of necessity that the *remedial means* to be employed must be nearly similar; and that the pernicious use of drugs should be at once abolished from the treatment of those diseases for the relief and cure of which more useful and simple means may be found.

The late eminent physician Dr. John Gregory, so distinguished for his elegant writings, in “An Essay on the office and duties of a Physician,” remarks that “the affectation of *concealing* the medical art, retarded its progress, rendered it suspicious,

and tended to *draw ridicule and disgrace upon its professors.*"

It would surely then better become medical men of the present day, were they to discard at once the *mystery and concealment* which they affect in the practice of their art, and give to the public the results of their experience in plain and simple language, and thus put within the reach of all, the immediate means of attaining and preserving that greatest of all blessings, "*good health.*"

Convinced of the benefits that would result to the public at large by putting such a precept into example, the author was induced to print and publish the *first* edition of this work, written *in a style easily understood by persons of the meanest abilities*, thus increasing greatly its general utility; and he has only to regret that men of greater talent should not have directed their attention more to works written in a style at once so *simple and popular*; but it is to be feared, that whilst "*Book-making*"* is so profitable as to induce persons from

* The Author was extremely amused on taking up a book lately, at perceiving that it was a *Translation* from a *French* medical work, *stated to be by* * * * * *, * * * * * a person who *practices* in London as a *medical man*, and who, a short time since, was at Paris in company with him (the Author), when on one occasion they were *both* obliged to go without their dinner at the house they were in, because neither of them *could* ask for it in *French!!!*

base and sordid motives, to send forth piracies into the world as sterling productions, (perhaps sufficiently garbled to evade detection,) the public will be deprived in a great degree of the benefit resulting from plain, easy, natural, and at the same time forcible compositions.

In conclusion, the reader will observe that throughout the volume the author has availed himself, in his notes, of quotations from the works of many talented men, both ancient and modern, in support of his assertions; men of sterling abilities, who, for the most part, are now beyond the reach of flattery, but who, when living, were among the brightest ornaments of human excellence; and he cannot but indulge himself with the cheering hope that his exertions in the cause of the public health and weal, supported and sanctioned as, he is proud to say, they have hitherto been, will again insure as favourable a reception to *this edition* of his work, as his former ones received, the rapid sale of which was to be attributed much to the simplicity of its style and composition; its object being

“To hold the golden mean,
To keep the end in view, and follow nature.”

Lucan, book ii. verse 381.

CONTENTS.

	Page
Introduction—National Prejudices removed—Failure of Purgative Medicines—Lavements recommended	1
National Character for Delicacy—Lavements in general use in Foreign Countries—The best Preservative against the first attack of Disorder—Badly constructed—The Author invented the Stomach-Pump	2
The Adaptation of the above Discovery to the purpose of relieving Diseases of the Bowels—Approval of these Inventions by Medical Men throughout the World	3
Self-application of Lavements—Form and Functions of the Alimentary Canal	4
Novelty of Lavements in this Country—The Author in- troduces his Invention of the Stomach-pump into Paris, by the recommendation of Sir Astley Cooper, and other celebrated men	5, 6

CHAPTER I.

A brief View of the Form and Functions of the different
Parts of the Digestive Organs—A knowledge of the
Structure of the Viscera necessary

	Page
The Trunk of the Body divided into two Cavities—Contents of Thorax	8
Contents of Abdomen—Description of Pelvis	9
Contents of Pelvis—Mastication—Saliva necessary to Digestion	10
First Process of Digestion described—Œsophagus described	11
Cardia, or Opening into the Stomach, described—Stomach described—Pylorus, or Outlet from the Stomach—Divisions of the Small Intestines, with their Names—Large Intestines, &c.	12
Communication of the Gall with the Intestines	13
Use of Pancreas, or Sweetbread—Cæcum, with its Valve—Position described	14
Changes that the Food undergoes in its Passage through the Alimentary Canal	16
Kidneys, use of	17
Most of the Diseases more particularly relieved by the use of Injections—situated in the Large Intestines	18
Chyme described—Chyle described	19
Absorbents referred to—Propulsion of the Food through the Intestines	21
Large Intestines supplied with Absorbents—Experiments proving the above fact	22
Lavements indispensable in Medical Practice—Depending entirely on the aid of Purgatives in Diseases dangerous	23
Patent Medicines alluded to	24
Disease produced by Purgatives	25
Caution, with regard to the indiscriminate use of Mercury	27

CONTENTS.

XV

Page

CHAPTER II.

Description of the Heart	31
————— Lungs	39
————— Pericardium or Sac surrounding the Heart	42
————— Œsophagus, or passage leading from the Mouth to the Stomach	42
————— Stomach	43
————— Intestines	45
————— Liver	46
————— Gall-Bladder	47
————— Passage leading from Gall-Bladder to the Intestines	48
————— Bile	49
————— Spleen	50
————— Pancreas, or Sweetbread	50
————— Absorbents	51
————— Nerves	52
————— Kidneys	53
————— Ureters, or passages leading from the Kidneys to the Bladder	53
————— Bladder	54

CHAPTER III.

On the Secretion of Urine, as connected with the Cir- culation of the Blood	55
The Food and the Drink mix together in the Stomach	55
On the Secretion of Urine	56, 57
Anecdote by Sir A. Cooper	59
Remarks of Ignotus	60
Component parts of the Urine	61

CHAPTER IV.

Of Indigestion—Costiveness—Lavements recommended for the Cure of the above	62
Danger attending the neglect of the Bowels	64
Energy of the Intestines restored by Lavements	65
Necessity of Vegetables with our Meals—Females re- commended to observe the state of their Digestive Organs—False notion of delicacy in Females	66
Anecdote of a Scotch Physician	67
Monthly Indisposition	68
Pregnancy—Childbirth	69
Commencement and Cessation of Menses	70
Suckling and Weaning	71
The Human Species subject to twelve hundred varieties of diseases	72

CHAPTER V.

Of the Prevention and Cure of Indigestion and Costive- ness—Future enjoyment in Life depending on present state of Digestion	73
Extract from Dr. Burne's Oration	74
Inattention to the Calls of Nature	75
Affections of the Mind inducing Constipation	76
Opinions of eminent Medical Men on the subject of Enemas	77
Dr. Baillie's Observations	78, 79
Extract from Dr. Arnott's Elements of Physic	82
Post-mortem Examination of a Female	85
— another Female	87
Action of different Medicines in their simple as well as combined States	88, 89

CONTENTS.

xvii

	Page
Danger of Domestic Medicines—Lodgment of Excrementitious Matter in the Cells of the large Intestines	90
Case of Miss P.	92
Seven-eighths of the Diseases that occur arise from neglect of the state of the Bowels	95
Fœtid state of the Excrement	95, 96
Quantity of Excrement—Colour of Excrement—Consistence of Excrement	97
Perspiration	

CHAPTER VI.

Of Diet in Indigestion and Costiveness	101
Aliments best suited to the Digestive Organs	102—113
Drinking warm Water with Meals	113, 114
Inconvenience of drinking cold Fluids with our Meals	115
Proper proportion of Drink with our Meals—Death of a young Countess by drinking hot Tea	116
Broths, Soups, &c. not nourishing	120
Anecdote concerning the Penitentiary	121
Cooking	124
Condiments	125
Salt	126
Observations on the previous Subjects of the Volume	127—134

CHAPTER VII.

Of the Use of Lavements in various Diseases	135
Some of the principal Diseases in which Lavements are required, specified	135, 140
Introduction of cold Water dangerous	140

	Page
Spasms of the Bowels	141
Quantity of Fluid to be injected	141
Proper time to administer Lavements—Position for Pregnant Women	142, 143
A Remedy for every Disease	144

CHAPTER VIII.

Description of the Apparatuses for Lavements recom- mended by the Author, with Recipes for Injections —Objections to Syringes that are too small	146
Directions for the Application of Syringes	147
Plate describing the Application of the Improved Syringe	148
Description of the Flexible Clysmo-duct	149
Plate of the Clysmo-duct	151
Recipes for Medical Injections	152, 167

CHAPTER IX.

Of Medicated Injections in some Diseases of the Fe- male Organs, with Recipes for various kinds of Injections which may be used in these Diseases	168—178
---	---------

CHAPTER X.

On the Regimen of Persons subject to Indigestion, Costiveness, and other Affections of the Digestive Organs	179
On Air	180
Exercise	184
Sleep	188
Anecdote of two Dogs	191

CONTENTS.

xix

	Page
Clothing	195
Anecdote of Queen Elizabeth	197
On the periods for Eating and Drinking	205
The Use and the Abuse of Spirituous Liquors	207
In all cases of Difficulty and Danger, call in the aid of a respectable Medical Man	212
Observations	212
Attention to the Digestive Organs necessary in every Disease	213
Caution not to overload the Stomach	215
Quantity and Quality of Nutriment	216
French Bill of Fare	221
The various Tastes of different Nations	222
Mr. Warren's Book on Diet	225
Scriptural Diet recommended	227
Anecdote of a Tiger	233
Bears fed on Vegetables	234
Regulate the system of Diet according to circum- stances, age, avocations, &c.	238
Regularity in all pursuits necessary	238
Story of Cornaro	240
Cleanliness recommended	245
Vapour Baths recommended	246
Plate of Vapour Bath	247
Drunkenness a great evil	249
Moderation in all things best	251
Table of Doses	253
Purgative Pills	254
Stimulants	255
Tonic, Stomachic, and Aperient Recipes	256

	Page
Diaphoretics	257
Alterative and Laxative	257
Useful Family Prescriptions	259, 269

CHAPTER XI.

Particular Directions respecting the choice of Lavement Apparatuses; with a Description of the Construction of those recommended by the Author, and the Mode of using them—Mr. Earle's Ball-valve	271
Mr. Maudsley's Ball-valve	271
Mr. Farey's Ball-valve	272
———— Letter to Mr. Maudsley	273
Objection to the use of Ball-valves	274
Instruction for choosing Lavement Apparatuses—Brass Syringes dangerous	276
The Improved Lavement Apparatus—Directions for using the Improved Lavement Apparatus	278
Plate of Clysmo-duct	151
Description of the Flexible Clysmo-duct, as improved by the Author, and of the manner of using it	281, 282
French Instruments	286

CHAPTER XII.

On Corpulency—Considered as an Improvement to the Figure	287
Considered as a disease	287
Fat about the Kidneys	288
Cause of Corpulency	289
Corpulency dangerous	290
Cure of Corpulency	291—293

ON INDIGESTION,

&c.

INTRODUCTION.

THE period seems at length to have arrived when our prejudices are disappearing before the lights of science and experience. In no other department of medical science is this so obviously the case as in that which more immediately relates to the subject of the present little work. The experience of ages, in every country and climate, had proved the frequent inconvenience and failure, and the not less frequent impropriety, of exhibiting purgative or aperient medicines in the usual manner, and shown the advantages which accrued from the employment of the

same kind of remedies in a different form, namely, in that of *Lavements*. Prejudices, in many respects inseparable from our national character, and honourable to our feelings, have prevented the general adoption of this practice amongst ourselves, except in dangerous cases ; although it has long been generally resorted to in foreign countries, as a necessary domestic mode of treatment in the majority of ailments, as well as one of the best preservatives against the first attacks of disorder.

This disinclination to employ a very beneficial, and, indeed, almost indispensable method of relief, arose in some degree also from the construction of the apparatus formerly used for the purpose. Some of these required the assistance of a second person ; and all of them were either managed with difficulty and inconvenience by the individual who required their use, or with little service. Fortunately, the *author's invention of the stomach-pump*, and the practical application of its principle to the injection into, and withdrawal of

fluids from the stomach, furnished the profession, and the public in general, with an easy and not unpleasant means of accomplishing that, which had been so great a desideratum in medical and domestic practice, and led to the attainment of all that could be desired in the employment of numerous remedies, as *Lavements*, in the treatment of the various complaints to which the human frame is liable. This adaptation of *his discovery* to so useful a purpose, had been attempted by various mechanists, and with some success. None of them, however, satisfied him ; and after much consideration and various modifications, he has constructed a new apparatus upon principles which will ensure the convenient, efficacious, and most delicate employment of this plan of treatment, and which has been approved of by the most eminent medical practitioners of this country and the Continent, as the most efficacious one in removing not only those affections which are noticed in this work,

but also many other diseases which could not be included in its limits.

Having thus attained the principal objects of the invention, viz., a perfect apparatus for the exhibition of *Lavements*,—complete in its operation, admitting of the readiest adaptation, and easiest employment by the person requiring its use, without the least alarm to the most sensitive feelings,—the Author thinks it only due to himself, as the person *chiefly concerned in its invention and improvement*, to acquaint the public, (whose ailments it is intended to remedy,) with the advantages attached to the self-employment of *Lavements*, in the prevention as well as in the cure of diseases.

In order that the reader may understand this first object, viz., the prevention of disease, as far as preserving a regular state of the bowels may contribute to it, the Author will first give a brief view of the form, relations, and functions of the alimentary canal, or those organs more immediately

concerned in the office of digestion ; and he will afterwards offer some remarks upon those circumstances which more especially require the employment of *Lavements* and *Medicated Injections*. He may truly state, that there is nothing advanced in behalf of this mode of treatment, which is not well known to every member of the medical profession, but which, owing to its novelty in this country, is, generally speaking, unknown to the public, and consequently to the great majority of his readers.

The instrument called the “ *Stomach-pump*,” was, when first discovered*, found to be the best one for the administration of *Lavements* ; and the Author takes the present opportunity of stating, that *his* invention of the *stomach-pump*, has already been the means of saving the lives of *many hun-*

* The *best* instrument *now* in use for the administration of *Lavements* is the self-acting Clysmaduct, (hereafter alluded to in this book,) which is approved of by all the leading men of the profession.—Sold by T. Harcourt, Manufacturer of the newly invented Trusses, 12, Carlton Street, Waterloo Place, Pall Mall.

dred persons ; and that, immediately upon its promulgation, it received the approbation of the most eminent medical men in this country, and in Paris, where the Author introduced it with *strong recommendations in its favour*, with which he was honoured by Sir Astley Cooper, and other celebrated Surgeons ;—and that it is now adopted by every member of the profession.

CHAPTER I.

A *general* VIEW OF THE FORM AND FUNCTIONS
OF THE DIFFERENT PARTS OF THE
DIGESTIVE ORGANS.

As preliminary to the following pages, I shall endeavour to describe the offices of the several organs connected with digestion, together with their situation, connexions, and appendages. In order to render this description more easily understood by my non-professional readers, I beg to refer them to the sketch facing the title-page, which will greatly assist them in forming a correct judgment on the subject, the advantages accruing from a knowledge of which must be obvious to every thinking mind, inasmuch as it is calculated to teach us the benefits which result from regular habits of living,

leads us to select the most appropriate kinds of food, to guard against eating indigestible substances, to divide our time judiciously between exercise, air, meals, and rest ; and, in impaired health, to assist, by proper means, the natural action of the digestive organs.

The trunk of the body is divided into two principal cavities or chambers, denominated the *thoracic* and *abdominal* cavities. The former is separated from the latter by means of a transverse muscular arch, called the *diaphragm*, or midriff, which will be seen by reference to the sketch. The upper cavity is the *thorax*, or *chest*, and contains the *lungs* on each side, and the heart *nearly in the centre*, but rather pointing, at its lower extremity or apex, towards the left side (which position of the apex gives rise to the common opinion that it is situated on the left side), and is inclosed in a membranous sac called the *pericardium*. These organs, with their various appendages, and the *œsophagus*, or passage for the food to the

stomach, running down from the back part of the mouth, between the lungs and behind the heart, form the chief contents of this cavity.

The second cavity, the *abdomen*, the abdominal cavity, or the belly, as it is variously called, situated below the *thorax*, immediately under the *diaphragm*, may be divided into two compartments,—the first and largest being the belly, or the abdomen proper, and the second and inferior, the *pelvis*. The first of these contains the *liver*, *gall-bladder*, *stomach*, *small* and *large intestines* (with the exception of the rectum), and *mesentery* (a membranous production, for the purpose of sustaining the large intestines in their proper situation, and by which they are, in a manner, suspended) ; *pancreas*, *spleen*, *kidneys*, and *large blood-vessels*, with *absorbents*, *nerves*, &c. The lower compartment of this cavity, or *pelvis*, so called from its resemblance in shape to an ancient basin used by barbers, is formed or surrounded by the two hip-bones, and the bones at the

bottom of the back, which, being united by strong ligaments, form, as it were, the basis of the trunk of the body. It contains the *urinary bladder*, the *rectum* (or last and lowest of the large intestines), the *womb*, and all the *internal organs of generation*. But as our attention is chiefly directed to the alimentary canal, it was not necessary to delineate the whole of these organs in the descriptive plate.

The mouth is the organ of mastication, and is a preparatory apparatus to digestion. It is provided on the internal surface of the cheeks, at the angle of the jaw, and beneath it, with glands, which secrete the saliva,—a fluid indispensable to the preparatory office of digestion. Mastication, by which is signified the reducing or grinding down the food into small particles, and imbuing it with the saliva, is performed by means of the teeth, assisted by the action of the jaws, the tongue, the cheeks, and the lips. The upper jaw is fixed; it is only the lower one that moves, which being hung by a sort of

hinge, so constructed as to allow of a double action, is impelled by muscular power, not only up and down, but from side to side also. It is thus enabled more effectually to divide and tear the food to pieces * : whilst the tongue is continually engaged during this process in forcing it between the teeth, the cheeks and the lips resist it on either side, and prevent it, after being properly masticated, from falling out of the mouth. During this grinding and lacerating process, the particles of food become intimately mixed with the saliva and the mucus of the mouth, and are then fit to be received into the stomach, having undergone what may be termed the first process of digestion.

The *œsophagus* is the passage leading from the back part of the mouth (or *fauces*), down which the food passes into the *stomach* in its masticated state, and where it undergoes the principal part of the digestive process. This passage descends into

* Digestion cannot be good, unless this, the first part of it, be thoroughly performed.

the abdomen, and is united to the upper opening into the *stomach*. This opening is called the *cardia*; and the passage to it from the mouth (the *œsophagus*) proceeds in an almost perpendicular direction; but towards the lower part it inclines a little to the left side. The *stomach* is situated chiefly on the left side, placed in a transverse direction, across the upper part of the belly or *abdomen*, and terminates on the right side, in that part of it called the *pylorus*, where that portion of the digestive canal, named the intestines, commences, which gradually and irregularly increase in size, forming many circumvolutions, until they terminate at the *anus*. For the convenience of anatomical demonstration, the intestines are divided into six imaginary portions, there being no actual or visible line by which their intermediate parts can be said to terminate or to commence. They are thus named:—

<i>Duodenum,</i>	} or small intestines.
<i>Jejunum,</i>	
<i>Ileum,</i>	

<i>Cæcum,</i>	}	or large intestines.
<i>Colon,</i>		
<i>Rectum,</i>		

The *colon* is also described as having four divisions, viz., the *ascending portion*, *transverse arch*, *descending portion*, and *sigmoid flexure*.

That portion of the small intestines called the *duodenum*, commences at that outlet of the *stomach*, named the *pylorus*, and is in length from nine to twelve inches. About the middle of it there is a small perforation, which is the opening of the ducts that lead from the *liver* and *gall-bladder*. This duct, which is single at its entrance into the small intestine, and is called the common bile duct, is formed of two others,—one coming directly from the *liver*, the other from the *gall-bladder*. Through them the bile passes from the *liver* and *gall-bladder*, for the purposes of digestion.

It must, therefore, be obvious to every reflecting mind, that this portion of the intestines has important duties to perform, on

account of the changes which the food undergoes in it. Young practitioners will do well to remember its precise situation, curvatures, proportions, and functions, and its liability to derangement ; otherwise, a confused conception of a disease might be the result, attributing it either to the *stomach* or *pyloric outlet*, or, perhaps, to some other portion of the intestinal tube below,—particularly if the patient should not describe his sensations clearly. It will, therefore, be seen that the *liver* supplies bile to the intestines, independent of that which passes from it into the *gall-bladder*, which may be considered as a reservoir for the supply of bile, in case of any sluggish action of the *liver* itself, and it has, therefore, only an occasional demand on it.

Another duct enters this intestine, in some cases along with the common *bile duct* ; in others, very near to it. This other duct comes from the *pancreas*, or sweet bread,—a large gland situated behind the *stomach*, whose office it is to supply the small intes-

tines with a fluid resembling *saliva*, which, with the bile, is essential to the due performance of digestion. The *jejunum* and the *ileum* follow, and form the remaining portion of the small intestines. They terminate, where they enter the *cæcum*.

The *cæcum*, or first part of the large intestines, is a large *cul de sac*, in which the small intestines terminate in a sort of valve, which prevents the return of the contents of this part of the bowels into the *ileum*, or small intestines. In the *cæcum* those changes in the contents of the intestines commence which constitute their *fæcal* characters. The *cæcum* lies in a transverse position, just over the right groin, and thence begins to ascend, taking the name of *ascending colon*.

The *colon*, then, (under the name of *ascending colon*,) rises as high as the *liver*, under the right lobe of which it forms an angle, and turns across to the left side, being here denominated the *arch of the colon*, or the *transverse colon*. It afterwards again forms an angle under the left side of the

stomach and the *spleen*, and then descends to the upper part of the left groin, under the name of *descending portion of the colon*, where it makes another remarkable and sudden turn inwards and upwards, which is termed the *sigmoid flexure of the colon*: then once more turning down, towards the middle of the pelvis, it is named the *rectum**, and terminates at the *anus* †.

The *food*, from the moment it is taken into the mouth, follows exactly the course of the alimentary canal which has been described, and in different portions of it undergoes those changes requisite to the separation

* A very frequent cause of intestinal obstruction arises from *stricture of the rectum*, and whenever such disease is in the least suspected, no motives of delicacy should prevent an immediate application to a medical man; the author has witnessed many disastrous cases from this neglect, and he is enabled to hold out every prospect of cure by early attention to it, provided the proper treatment is resorted to.

† This part is liable to a formidable disease called *fistula in ano*; the author would also caution his readers thus afflicted, not on any account to neglect it, but to obtain immediate surgical advice for it.

of the nutritive parts from it ; which having been effected, the fæcal portions, together with various hurtful matters, secreted from the glands and surfaces of the bowels, are discharged from the body at the termination of the canal.

The *drink* or fluid taken, as well as the food, passes into the stomach, mixes together and assists, with its juices, to form that pappy mass called *chyme*, from which the *chyle*, or nutritious portion of the food, is formed, and does not, as is frequently conceived by those who are ignorant of anatomy, descend in a different channel ; but is carried from the stomach and intestines, by absorbing vessels, into the *blood*, from which it is again separated by the *kidneys* into *urine*, which, passing from them by means of two ducts to the *bladder*, is retained there until enough is accumulated to distend this organ and excite to its evacuation ; but a more particular description of this process will form the subject of the third Chapter.

It is to that portion of the digestive tube,

denominated the large intestines, that I have now more particularly to call attention ; and it may be here observed, with what wonderful art the Supreme Contriver of all things has formed these parts, that at the division between the ileum or termination of the small intestine, and the entrance into the cæcum or large intestine, a *valve* should be placed to prevent the regurgitation of the fæces back into the small intestines,—a circumstance which must otherwise have rendered us all the objects of fetid disgust to each other.

The *cæcum*, or bag-like part of the intestine, and *the ascending portion of the colon*, are the seat of almost all those difficult diseases which the newly-invented apparatus is calculated to overcome, and which, if neglected, form the basis of many incurable maladies that soon prove fatal, or render the wretched patient miserable for life.

I will now proceed to describe more particularly, the changes that occur in the character of the food, in its progress through the alimentary passage ; and I shall here ob-

serve, by the way, that it is of the first, and utmost importance, that the food should be thoroughly masticated, not only on account of the division or breaking down of the particles or fibres that constitute it, but also that it should be well mixed with the juices of the mouth, without which it cannot be in a proper state to be received into the stomach, there to undergo the next change, which is chiefly effected by a powerful dissolving fluid secreted from its coats, denominated the *gastric juice**. This fluid, assisted by a certain action of the stomach itself, changes the food into a kind of pulpy mass called *chyme*, which passes through the *pylorus* into the first small intestine, or *duodenum*.

* Dr. Kitchener observes, that the sensation of hunger arises from the *gastric juices* acting upon the coats of the *stomach*; how injurious it must be to fast too long, for, by neglecting to supply the *stomach* with some alimentary substance which this fluid was formed to dissolve, it becomes in danger of being digested itself! Spallanzani, an Italian naturalist, affirms that he has produced artificial digestion by applying gastric juice (taken from some animal) to aliment that had been first sufficiently masticated, taking care that it was submitted to a sufficient degree of heat.

It is when this mass is incorporated with the *bile*, (conveyed by means of the small pipe or tube, about the size of a writing-quill,) emerging from the *liver*, and entering the gut, and mixed with the secretion from the *pancreas*, that the nutritive portion of it, the mass, is separated. To this portion, for the purposes of description, the name of *chyle** is given; and this substance, as it continues to be formed during the progress of the change through the intestines †, undergoes the complete process of filtration, as the pure fluid, or nutritious parts, are taken up and conveyed

* This fluid, when perfected, possesses all the qualities and properties of blood itself, and is in truth the same in all respects, except the colour. According to Dr. George Fordyce, and Dr. D. Uwins, it separates when cold into three distinct parts, as serum, coagulum, and globules,—but the globules are colourless, while those in blood are red.

† The entire operation of converting or changing food into blood is effected by the combined efforts of mechanical and chemical agency; in the very commencement the action of the jaws and tongue, combine with the solvent powers of the saliva, and then again the churning of the stomach, with the gastric juice; after this the peristaltic motion of the intestines, with the bile, and so on.

into the blood for our daily nourishment, by a number of little vessels that perforate the intestine for this wise and wonderful office, and which are called *absorbents* or *lacteals**. The coarser or gross materials are propelled onwards until they arrive at the large intestinal bag called the *cæcum*, or *commencement of the colon*, where they first assume a more consistent or figured appearance, partake of a peculiar fetid odour, and are, by the *peristaltic*, or spiral-like action of the intestine itself, propelled up the ascending or *difficult* portion of the *colon*, then across the transverse and other portions, till they arrive at the last great gut, the *rectum*, where they remain, till, by their quantity, its coats are stimulated to the last or expulsive effort, which, in a perfect state of health, should be performed at least once in every twenty-four hours.

It must here be observed with respect to the absorbing vessels, that they are not con-

* These were discovered, as well as their use, as far back as the year 1622.

fined exclusively to the small intestines, but that they pervade every part of the whole tube, only differing in number and office according to the duties they are allotted to perform. In proof of this it may be mentioned, as a well-known fact, that if tobacco fumes are injected into the *rectum*, (as is sometimes done in *strangulated hernia*,) the patient shortly becomes comatose from the narcotic principle of the herb.

With regard to *opium* and other drugs of the soporific kind, we are also well acquainted with similar results*. In one case I had the opportunity of injecting a quantity equal to eight glasses of gin and water, as it is commonly mixed for drinking at taverns, and in one hour afterwards the man was in a complete state of intoxication. He stated to me, that four glasses of liquor thus mixed was as much as his head could bear when

* In the reign of James I. Sir Thomas Overbury was poisoned in the Tower of London, with an envenomed clyster, by the connivance of the Earl of Somerset and his Countess.

taken into the stomach. I should also refer to the administration of soups, arrow-root, &c., by which patients have been supported for many weeks together, solely by means of injections. These are proofs sufficiently strong to warrant the assertion, that *Laxatives* are *indispensable* in medical practice, especially as every practitioner is well aware that he does not possess absolute authority over the power of digestion, or intestinal action, even if he calls in aid his whole catalogue of purgative medicines, down even to the far-famed *croton oil*,—*one drop* of which has been said to succeed, when all other medicines have failed,—without having recourse to injections. At the same time I beg it may be understood, that I set as high a value on the use of purgatives, as any man in the profession, and am persuaded of their important influence in the treatment of numerous diseases,—and that they are absolutely necessary in medical science; but it is of their abuse, not their use, that I complain*. It

* An Irish labourer called on me some years since, for

is a well-known fact, which daily experience goes to prove, that our churchyards are the receptacles of thousands who fall a sacrifice to the implicit confidence placed on this class of medicines, unassisted by other means, especially by the use of *Lavements*. Such, indeed, has been the mad rage for the purchase of *patent drastic pills* and powders, that the stomach and bowels have had their vital energy entirely destroyed by them, and the necessity for a daily repetition, as well as additional strength, has been increased by every repeated dose, until the bowels are rendered callous to all remedies, and the case at last terminates in irremediable or fatal disease, frequently in most obstinate *consti-*

whom I prescribed twelve purgative boluses, each of which contained two grains of calomel and five grains of cathartic extract, with directions that one was to be taken every other night. On the third day afterwards, I was sent for, in a violent hurry, to see this man, who was dangerously ill; he had found that one pill had not produced the desired effect on his bowels, and had taken the whole box of them, as he said *to make sure*.—I need scarcely add, that the poor fellow nearly lost his life.

pation, cholera, violent colic, inflammation, iliac passion, gangrene, and death.

“ Your pills can ne’er be prais’d enough,
Although you charge so dear,
They’ve killed my aunt, though dev’lish tough,
And I’m her only heir.”

It is the same with purgatives as with stimulants. Stimulants require to be repeated: if a man gets intoxicated to-day, he wants a dram to-morrow. If a person takes a powerful purge to-day, he will require another to-morrow, or no satisfactory relief will be obtained; and most persons are acquainted with this fact. Independent of this, the stomach and bowels are kept in a constant state of irritation and uneasiness by purgatives; and in weak constitutions, numerous are the diseases produced by this mode of practice*; some of these are particularly caused

* Nothing in our legislative law, with regard to medicine, requires so much to be revised as the Apothecaries’ Act, which permits men to gain their livelihood by sending in *medicines* in any quantity they please to the sick they attend, on which they make a charge, instead of being paid for the visit (as is the custom in France), by which they are enabled

by *aloetic* purges, of which I shall presently take further notice when speaking of the treatment. I allude to *piles*, *fistula*, and *stricture in the rectum*; and why should we punish ourselves by aggravating disease, when we possess the ready, convenient, safe, and efficacious means in our own hands, not only to avert evil, but to improve our health? I allude again to the use of *Lavements*, both to assist the operation of mild aperients, as well as for the purpose of mol-lifying and mechanically removing hardened collections of *fæces*. Nor should it be forgotten, that many of the difficulties that arise in weak constitutions, in digesting the daily food, and in effecting the necessary relief required by nature, do not proceed (as is supposed by some authors) entirely

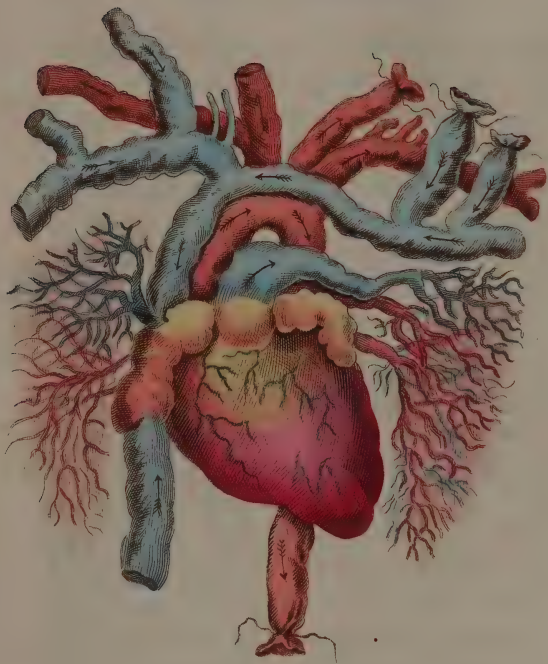
to mount up a bill, thereby adding doubly to the suffering of the unhappy patient. Men, like the generality of apothecaries, who are educated as gentlemen, should have a more honourable way of being remunerated, than such a chandler-shop-like proceeding as this—for an excellent note on which, see “Popular Illustrations of Medicine,” by Shirley Palmer, M.D., p. 92.

from the large intestines ; but that the want of proper mastication, the deficiency of the juices of the stomach*, the obstruction to the course of the bile, the decreased tone of the coats of the stomach and small intestines, the absence of sufficient exercise, depression of spirits, anxiety of mind, and various other causes, combine to render digestion incomplete before the large intestines are called into duty ; and it is from these reasons, therefore, that purgative remedies, in the hands of experienced medical men, are, in a great degree, essential to the life of the patient.

There is also another class of medicines to which I must refer before I leave this subject, I mean the mischievous effects frequently produced in consequence of the indiscriminate use of preparations of *quicksilver*, or, as it is otherwise called, *mercury*. There is scarcely a prescription for pills of

* Called gastric juice, a deficiency of which was supplied in the case of an Italian physician, who was troubled with indigestion, by having recourse to the gastric juice of an ox, which experiment proved fully to succeed.

the purgative kind, from either the *regular* or *irregular* practitioner, that does not contain this poisonous preparation in some form or other, let the complaint of the patient be whatever it may ; and I am of opinion that thousands of infants, as well as adults, perish from this cause alone.—At the same time I am also compelled to say, that in medical practice it is frequently a *sine quâ non*, and when administered by men of sound professional judgment, it is greatly to be depended upon for the cure of some maladies ; but it is a hobby that many ride on all and every occasion. The learned Dr. John Mackintosh, lecturer on physic, in Edinburgh, in his *Elements of Pathology* and the *Practice of Physic*, p. 181, thus writes : “ If the liver is not doing its duty properly, *calomel*, or the *blue pill*, (both of which are preparations of mercury,) may be exhibited at bed-time, followed by a very small dose of salts in the morning ; but it is a despicable practice to give *blue pill* in every disease connected with the *digestive func-*



This Plate represents a front view of the human Heart and Lungs, drawn from nature, the arrows denote the course of the blood. The Arteries and Veins in this view are so intricately blended with each other as to make it too complex to be easily understood by the general reader, the Author, therefore, has drawn a more familiar view, which will be seen by reference to the next Plate, N^o III.

tion. And it is much to be regretted, that the name of *Abernethy* should be associated with such insufferable quackery."

I, therefore, repeat again, that *mercury* is a dangerous remedy, unless administered under the direction of men of professional skill, and should generally be avoided by the domestic practitioner.

I shall now proceed to give a brief view of the several *viscera*, separately arranged, including also the influence of the *nerves*, the office of the *lacteal vessels*, and the use of the *bile*, &c., well knowing that, unless my readers possess a pretty clear conception of their various functions, it will be impossible rightly to judge of their combined effects.

"Happy the man, who, studying nature's laws,
Through known effects can trace the secret cause."

VIRGIL.

These, then, commencing with two drawings of the heart, one a natural view, the other an artificial one, will form the subject of the next chapter.

REFERENCES TO PLATE III.

- | | |
|------------------------|-------------------------|
| 1. The right auricle. | 2. The right ventricle. |
| 3. The left ventricle. | 4. The left auricle. |

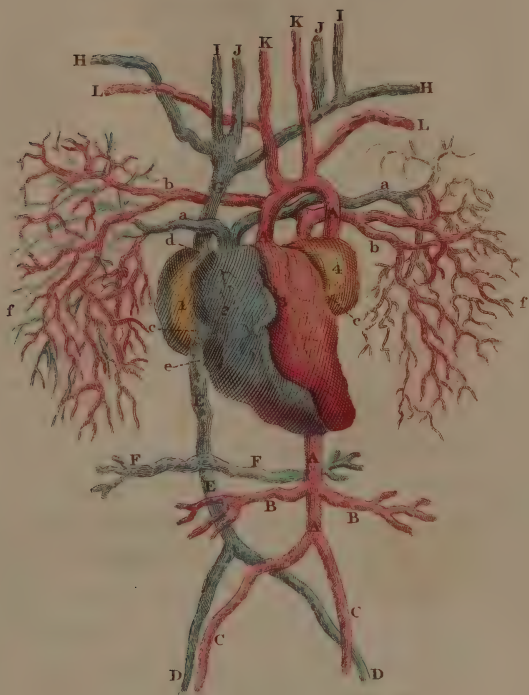
SYSTEMATIC CIRCULATION,
in which the arteries appear red, and the veins blue.

- A.A.A.A. The aorta, or great trunk of the arteries, which forms an arch as it emerges from the heart, from which it gives off branches to supply the upper extremities, and then turns down to supply the lower extremities.
- B.B. The emulgent arteries which lead to the kidneys.
- C.C. Branches from the aorta A., one for the supply of each thigh and leg.
- D.D. Corresponding branches of the large veins returning the blood from each leg and thigh.
- E.E. The great vein (called the vena cava ascending), returning the blood to the heart from the lower extremities.
- F.F. The emulgent veins returning from the kidneys.
- G. The great vein (called the vena cava descending), returning the blood to the heart from the upper extremities.
- H.H. The subclavian veins that return the blood from the arms into G., the great trunk leading into the heart.
- I.I. The external jugular veins that return the blood from the head.
- J.J. The internal jugular veins that assist to return the blood from the head to the heart.
- K.K. The carotid arteries that supply the head.
- L.L. The subclavian arteries that supply the arms with blood.

PULMONARY CIRCULATION.

It will be here necessary to observe that the arteries appear blue, and the veins red.

- a. a. The pulmonary artery to convey the blood to the lungs.
- b. b. The pulmonary veins to convey the blood back to the heart.
- c. c. The ducts of communication leading from the auricles to the ventricles.
- d. Where the blood from the upper extremities enters the right auricle of the heart.
- e. Where the blood from the lower extremities enters the right auricle of the heart.
- f. f. The lungs.



This Plate represents an imaginary or artificial Heart with the large trunks of the Arteries and Veins, and is intended familiarly to explain the circulation of the blood.

CHAPTER II.

DESCRIPTION OF THE HEART.

THE *heart* is a large, hollow, fleshy, muscular *viscus*, situated in the cavity of the *thorax* or chest, between the *lungs*, (see Plate I.) and its use is to constitute the primary organ of the blood's motion, or, in familiar terms, it is the fountain of the blood. It is divided into four chambers or cavities, (see Plate III.) The two outer and smaller, 1 and 4, are called *auricles*, from their resemblance to a dog's ear; the two inner and larger, 2 and 3, are termed the *ventricles*. 1, is the right *auricle*. 4, is the left *auricle*. 2, is the right *ventricle*. 3, is the left *ventricle*.

Every part of the system is nourished by blood, which is sent by the *heart* through

vessels called *arteries*; these, as they emerge from the *heart*, are large trunks, but they gradually decrease in size as they proceed towards the extremities, dividing and branching off into innumerable smaller vessels, and these again ramifying into various beautiful and minute sprigs, till they are even lost to the microscopic eye : it is at these terminations, (after having fed and nourished every minute part as they proceeded,) that they empty themselves into a corresponding set of vessels called *veins*, whose office it is to convey the blood back again to the *heart*; the twigs of these are as minute as those of the *arteries*, but they *increase* in size as they approach the *heart*; they also form large trunks. Either set of vessels (if dissected away from every other part) would appear like a beautiful tree with all its branches : and we might well exclaim with the psalmist that “ we are fearfully and wonderfully made !”

Through these vessels, then, the blood is incessantly flowing, and this constitutes what

is termed the systematic circulation. I have already stated that this circulation of the blood, is for the purpose of conveying its nutritious qualities to every part of the system*; and it is for this reason called the *systematic* circulation; but there is also another circulation of blood which takes place from the heart, through another set of arteries, and veins which communicate with the *lungs*, called the second or *pulmonary circulation*, which is for the purpose of conveying the blood to the *lungs* (after it has passed through the system), there to imbibe by respiration a certain principle from the atmosphere, necessary for its purification.

The entire circulation of the blood is performed in the following manner:—The left *ventricle*, 3, contracts and forces the blood into the trunk of the large artery, A.A.A.A.,

* “The *blood* is not only intended for the *nutrition* of our organs, but, by entering into their substance, it also keeps up their temperature in a permanent degree, let the circum-ambient heat be what it may.”—*Physiology of Man*, by P. H. Hutin, p. 117.

called the *aorta*; this gives off branches to supply the head, arms, &c., with blood, and then turning over in the form of an arch, descends to supply the *abdomen, legs, &c.*

The blood, after having reached the extremities of the arteries, is emptied into, or sucked up* by the veins, to be returned by them, to the heart, where it enters the right *auricle*, 1, by the large veins, E.E., bringing it from the lower extremities, and G., from the upper extremities.

The blood having entered the right *auricle*, 1, that *auricle* contracts and forces it through a small *duct*, c, into the right *ventricle*, 2; this also contracts and forces the blood through the *pulmonary artery*, a.a, into the *cells* of the lungs; these contract and force it, through the *pulmonary veins*, b.b., into the left *auricle* of the heart, 4, which also contracting, forces it through a small *duct*, c, into the left *ventricle*, 3, and so on

* Supposed to be by *capillary attraction*, and that there is an *intervening spongy* texture receiving the blood from the arteries, and imparting it to the veins.

again and again, incessantly circulating through the whole of our lives.

This circulation of the blood was not known till the celebrated Harvey made the discovery, early in the seventeenth century.

Having endeavoured as plainly as possible to describe the course of the blood in its circulation through the system, and described *two kinds* of circulation, I shall now proceed to inform my readers that the *blood* is also of *two kinds*; the one arterial blood, the other venous blood. The arterial blood is of a bright light crimson colour, the venous blood is of a dark damson or purple colour, as may be observed in a bason, after it has been drawn from a person's arm by bleeding.

I have stated that the circulation of the blood is *incessant*, continually passing from the heart through the *arteries*, feeding and nourishing from their extremities every part of the system; it is then sucked up by the corresponding ends of the veins, being deprived of its nutritious qualities, (which it has just parted with,) and is by these veins

returned to the *heart*, loaded with all the grosser and excrementitious portions of the fluids generated in the body: and from the *heart* it is pressed into the *lungs* to be again purified and made fit for the *arterial* or systematic circulation, as before explained.

The *blood* in the *veins* being loaded with impurities, becomes of that dark blue colour observable through the transparent coats of these vessels, and being cleansed of these impurities in its passage through the *lungs*, it assumes that bright and florid red colour observable through the transparent coats of the *arteries*.

Understanding then, that the circulating motion of the blood is *incessant*, it is necessary that my readers should be informed of the manner in which this is effected.

The action of the *heart* (which I have already described as a hollow *muscle*, and, therefore, subject to contraction and dilatation,) is effected by the excessive sensibility of the membranes or linings of its cavities, alternately opposed to its muscular power.

Its disposition to contract is produced by the irritation or stimulus of the blood acting on these membranes, and the disposition of the cavities again to dilate or re-open is produced by the natural action of their muscular power inseparable from life*. It is this action of the left ventricle which forces the blood into the arteries, and which propels it through the system by that jerking or throbbing sensation, which is called the *pulse*†.

There are *valves* placed at the different

* The contraction of the *heart* which forces the blood out of it, is called by professional men *systole*, and the dilatation which enables it to receive blood into it from the veins, is called *diastole*; thus Dr. Wilson Philip expresses the action of the *heart* in his "Experimental Inquiry into the Laws of the Vital Functions," p. 8:—"The *systole* and *diastole* succeed each other alternately and regularly, because the *stimulus* of the blood always occasions the former both in the auricles and ventricles, and the systole itself, by expelling the stimulus, occasions the diastole, which renews the systole by allowing access to new blood."

† Dr. Kitchener, after calculating the number of the pulse, finds it to average 100,800 beats in a day, and then says, "What machine of the most adamant material will not soon

openings into the *heart*, and at the outlet where the blood is poured into the large artery, A.A.A.A., which prevent its regurgitation. The impulse of the blood through the arteries is also assisted by the contraction of their coats on it, owing to their very great sensibility ; the veins are also supplied with valves at different parts, to prevent the blood from returning back into the arteries. The pressure of the muscular coat of the arteries forces the blood into the veins ; this is called the *vis ā tergo* ; the veins possess a similar muscular power to urge the blood onward to the heart, and they are abundantly supplied with valves to insure its flowing in the right course.

The *heart* is subject to a variety of diseases, such as *inflammation, malformation, abscess, gangrene, rupture, enlargement, ossification, an accumulation of fat around it, hydatids, conversion into cartilage, and* be the worse for wear from such incessant vibration ! especially if the *main springs* of it are not preserved in a state of due regulation ! !”

many others; it will not, therefore, be surprising that the circulation should sometimes be irregularly performed, which is discovered by an *intermittent pulse*.

THE LUNGS.

The *lungs*, a.a., Plate I., are two viscera situated in the cavities of the *thorax* or chest, one on each side, and are for the purposes of breathing, or inhaling pure air from the atmosphere in exchange for the impure air generated in the system, or, in better terms, for respiration and *sanguification*. They are of a light spongy-like substance, composed of innumerable vessels, terminating in small *cells*: these vessels uniting, form larger *trunks*, by which a communication is kept up with the heart, (both by veins and arteries); through one of these, the *pulmonary artery*, the blood is conveyed from the heart to the *lungs*, loaded with impurities, or what are termed in chemistry, *hydrogen* and *carbon*; which were received through the arteries into the cells

of the lungs, their delicate coats being *so thin* as to allow of a *chemical action of the air through them on the blood*, which deprives it of these impurities, and replaces in their stead *oxygen* and *caloric*, which are returned to the heart through the corresponding set of veins, as may be seen in the annexed plate.

The communication with the external air is effected through the *wind-pipe*, a tube commencing at the back part of the tongue, which, after descending a short way down, divides into two branches, one entering the *right lung*, the other the *left*: these branches again subdivide themselves into thousands and tens of thousands of smaller tubes or sprigs, which terminate in the *air-cells* of the *lungs*; and which being combined, assist to form the substance of the *lungs* themselves.

Dr. Hooper states the *exciting cause* of respiration to be “*the air rushing into the lungs, and irritating their nerves*, which irritation is, by consent of parts, communicated

to the *diaphragm* and the *intercostal muscles*," (the muscles between the ribs,) "and compels them to contract." "The contraction of these muscles with the *diaphragm*, and the pressure of the elastic air, upon the inner surface of the *lungs*, therefore, dilate the chest."

"The air being deprived of its stimulus, by inspiration, the *intercostal muscles* and *diaphragm*, become relaxed, the *cartilages of the ribs* and *abdominal muscles*, which were before expanded, return again to their former state, and thus the air is expelled from the lungs."

The *humid vapour* that is frequently observed issuing from the mouth on a frosty morning, is caused by the *hydrogen* escaping from the *lungs*, and uniting with the *vital air*.

The *lungs* are subject to several varieties of disease, such as *tubercles*, *inflammation*, *suppuration*, *ossification*, *adhesion to the pleura*, a membrane lining the ribs, &c.

THE PERICARDIUM.

The *pericardium* is a bag or sack surrounding and enclosing the *heart*, which contains a *fluid* in which the *heart* floats, and which prevents any unnatural pressure from injuring it.

It is subject to *dropsy* and *scrofulous humours*, and is sometimes found wanting.

THE ÆSOPHAGUS.

The *æso-phagus*, B.B., Plate I., is a tube or canal leading from the back part of the mouth or tongue, down the inside of the neck at the back of the wind-pipe, passing downwards through the cavity of the *chest*, between the *lungs*, and at the back of the *heart*, through a small opening in the *diaphragm*, and enters the *stomach*, into which it conveys the food after it has been masticated.

The *æso-phagus* is subject to *inflammation*, *ulceration*, *contraction*, *cancer*, *stricture*, &c.

THE STOMACH.

The *stomach*, C., is a large membranous bag or pouch, situated on the left side, at the upper part of the *abdomen*. See Plate I.

Blumenbach, in his *Physiology*, page 145, says, "The human stomach is capable, in the adult, of containing about three quarts of water."

It has *two* openings, one for receiving the food into it from the *æso-phagus* to undergo the processes of *trituration*, *fermentation*, and *concoction*, as they are variously termed by different physiologists *; and the other for discharging it into the *intestines*, after

* The late John Hunter used to address his pupils in the following way, when speaking of the functions of the stomach: "Some will have it that the stomach is a *mill*," (alluding to the tritulating process); "others that it is a *fermenting vat*, (believing fermentation to be its principal action on the food); "others that it is a *stew-pan*," (supposing that solution was the effect of its heat and steam); "but in my view of the matter, Gentlemen, it is neither a mill, a fermenting vat, nor a stew-pan,—but a *stomach*, Gentlemen,—a *stomach*."

having remained in the *stomach*, until required for the purposes of nutrition.

The *stomach* is abundantly supplied with *blood-vessels* and *nerves*, and sympathizes in a remarkable degree with every part of the body, every part of which sympathizes in turn with it, whenever it is in the least deranged. *In truth, it appears to be the centre of every impression to which any part may be subject, whether it be of mind or body.* It is besides not only the receptacle for the food we take, but for every thing that is received into the body, whether of a beneficial or deleterious nature: as well as for the medicines in the cure of the various maladies to which we are subject; the influence of all that it receives being diffused through the whole system; how necessary, therefore, must it be, that so important an organ should be preserved in a *healthy state!*

The symptoms by which we are enabled to judge of an unhealthy condition of the

stomach are various, such as loss of appetite, fullness after a light meal, general debility, disturbed rest, dreams, nausea, head-ach, dimness of sight, disagreeable taste in the mouth on rising in the morning, thirst, foetid breath, &c.; but one of the surest proofs is a *foul* state of the *tongue*, on which we may always more or less depend.

The *stomach* is subject to various diseases, as *inflammation*, *ulceration*, *scirrhus*, *cancer**, *abscess*, *worms*, &c.

THE INTESTINES.

The *intestine* is a membranous canal, situated in the cavity of the *abdomen*: it is of prodigious length, being six times the length of the whole body. It commences at the outlet from the *stomach* (called the *pylorus*), and after being coiled in many curious circumvolutions, terminates at the *anus* or outlet of the body, an account of which my readers will have already perused in the first chapter of this book.

* The Emperor Bonaparte died of cancer in the stomach, as did also his father!

Its use is to receive the *chyme* from the *stomach*, which it retains for a while, to blend it with the *bile* and *pancreatic juices*, to form *chyle*, and to separate the *excrementitious portions* for expulsion.

The intestine is subject to the following diseases:—*inflammation, ulceration, abscess, mortification, scirrhus, cancer, stricture, intus-susception, over-charged with blood, hæmorrhoids, worms, &c.*

THE LIVER. \

The *liver*, d.d., Plate I., is a large gland, of a dark red colour, with a tinge a little inclining to a dingy yellow; it weighs on an average nearly four pounds, and is situated immediately under the *diaphragm*, to which it is suspended: it is somewhat of a pear shape, having a larger and a smaller extremity; its most ponderous portion is on the right side; the other end, which is not so large, inclines over towards the left side, and partly covers the *stomach*, which is situated behind it; whilst behind, and towards the bottom

of the larger portion, will be found an appendage attached to it called the *gall-bladder*.

The use of the *liver* is to secrete *bile* from the blood, which it effects through tubes leading from the blood-vessels of the *stomach* and the other *abdominal viscera* ; these tubes uniting, form a vessel called the *vena portæ*, which enters into and ramifies through the substance of the *liver*.

The *liver* having separated the *bile* from the blood, propels it into the intestines for the purposes of digestion, through a tube called the *hepatic duct*, and if it has secreted more bile than is required for these purposes it deposits it in the *gall-bladder*, to be used as occasion may require.

The diseases to which the liver is subject, are *inflammation*, *abscess*, *tubercles*, *hydatids*, *mortification*, *adhesions*, *ossification*, &c. &c.

GALL-BLADDER.

The *gall-bladder*, e., is an oblong membranous bag, firmly attached to the under and

hindermost part of the liver*; it is the reservoir for the reception of superfluous bile, which it expels as occasion requires, or when the *liver* does not supply sufficient for the purposes of digestion. See Plate I.

The *bile* flows from it through a tube called the *ductus cysticus*, which uniting with the *ductus hepaticus*, forms the *ductus communis choledochus*, a tube leading into the small intestines.

The *gall-bladder* is sometimes diseased, being subject to *inflammation*, *gall-stones*, *hydatids*, &c.

THE DUCTUS COMMUNIS CHOLEDOCHUS.

This duct sometimes becomes obstructed by *calculi*, &c., which prevent the flow of the *bile* into the intestines, and occasion it to pass again into the blood-vessels, and is then distributed all over the body, giving rise to that disease called *jaundice*, which is

* In plate I. the *gall-bladder* is represented in *front* of the *liver*, instead of *behind it*, in order that the situation might be seen.

also sometimes produced in consequence of an over secretion of *bile*.

THE BILE.

The *Bile* is a greenish yellow fluid, of an alkaline, soapy nature, and possesses the chemical power of uniting the *watery* and *oily* parts of our aliment together, without which these could not be blended together, to form that bland, milky-like fluid necessary (before its conversion into blood) for the nourishment of the body. This *saponaceous* fluid may be considered as the *natural purgative* for exciting the action of the bowels and enabling them to throw off the grosser or excrementitious parts of our food.

The *bile* is sometimes obstructed in the *duct* leading into the intestines, in consequence of its becoming glutinous, by the evaporation of its thinner parts, leaving the denser portions to concrete, and thus forming those substances called *gall-stones*. Persons who live an indolent life, or who are much confined to the desk, are much subject to

this disease, on account of the sluggish disposition of the *bile* in its passage to the intestines.

SPLEEN.

The *Spleen*, g., is a viscus of an oblong shape and rather brown colour, situated in the upper part of the *abdomen* on the left side, rather behind the *stomach*. (See Plate I.) Its use has never been discovered. The celebrated Mr. John Hunter removed it from a wounded man, who recovered, and appeared as well in health without it, as he had previously been with it; and experiments have shewn that dogs will get fat after its removal.

THE PANCREAS.

The *Pancreas*, h., or, as it is sometimes called, the *sweet-bread*, is a large gland, in shape something like a dog's tongue; it is situated behind the *stomach*, to the right of the *spleen*; its situation is marked by a dotted line on the stomach. (See Plate I.) Its

length is about eight or nine inches, and it weighs about four ounces ; its office is to secrete a particular fluid, which is conveyed into the intestines to assist digestion.

It is subject to *inflammation*, *abscess*, &c. &c., and is sometimes altogether wanting.

THE LACTEAL VESSELS OR ABSORBENTS.

The *Absorbents* are numerous little vessels with open mouths, situated in various parts of the intestines, but mostly in that portion of them called the *jejunum* ; they are for the purpose of taking up the nutrition from the *chyle*, and conveying it into the circulation, through the *thoracic duct*, which is formed by the meeting of many of these vessels. The *thoracic duct* is about the size of a quill, but at its entrance it is larger than this, and forms a sort of *reservoir* for the reception of the *chyle* ; it is situated close to the back bone, running up and turning in many directions, until it reaches the *internal jugular vein* on the left side of the neck, at the angle formed by the *subclavian*

vein, which it pierces and enters: here the chyle, (before a white milky fluid,) by some peculiar action of the blood-vessels, and by mixing with the blood, changes its colour and becomes red,—in fact, becomes blood itself, and when it has reached the heart cannot be distinguished from the general mass of the blood. The precise way in which this changing of a white fluid to a red one (which is called sanguification) is accomplished is not thoroughly understood,—I shall only say, “Thy ways, O Lord, are past finding out.”

THE NERVES.

The *Nerves* are millions of little thread-like cords, which are the organs of sensation; and derive their origin from the *brain* and *spinal marrow*. They give power to the organs of the *external* senses, as *touch, sight, hearing, smelling, and taste*, and are the primary cause of the motions of all the muscles. The internal senses comprehend *thought, memory, ideas, conscience, reason-*

ing, passions, &c. &c., and distinguish man as superior to “the brute that perisheth.”

Nerves are subject to *disease*, but on examination of the body after death, this is seldom to be traced. *Tic douloureux* is one of the most formidable, and a *general wasting away* is another.

THE KIDNEYS.

The *Kidneys*, E.E., are two oval viscera situated behind the intestines, one on each side of the *spine*, as will be seen by reference to Plate IV. The use of these organs is well known to be for the secretion of the *urine*.—See Chapter III. The diseases to which the kidneys are subject are *inflammation*, *abscess*, *scirrhus*, *gangrene*, *calculi*, *ossification*, *ulceration*, *hydatids*, &c. &c.

THE URETERS.

The *Ureters*, D.D., see Plate IV., are the ducts that convey the *urine* from the *kidneys* to the *urinary bladder*; one leads downwards from each kidney and perforates the

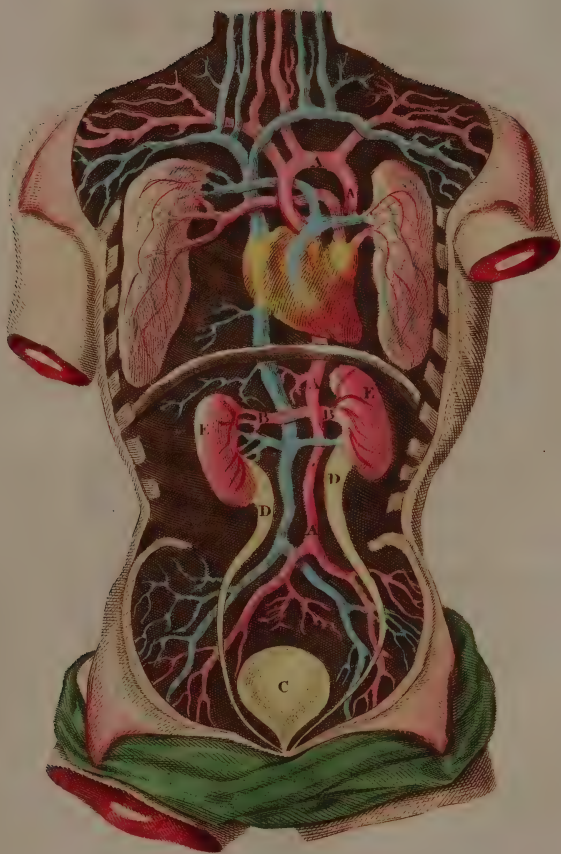
bladder at its lowest part or neck, on each side, a little towards the hinder part, and where they enter the *bladder* there are valves that prevent the *urine* regurgitating. They are subject to *inflammation*, *gangrene*, *abscess*, *calculi*, &c. &c.

THE BLADDER.

The *Bladder*, C., is a membranous bag situated in the *pelvis*; it is in shape like a balloon; its outlet is at the end of the neck or lower part, and its use is for the reception of the *urine*, which enters from the *ureters* at the side of the neck, as above described. For a further account see Chapter III. and Plate IV.

This, like all other parts of the body, is subject to various diseases, such as *inflammation*, *scirrhus*, *gangrene*, *cancer*, *ulceration*, *polypus*, *fungus*, *contractions*, *calculi*, *hydatids*, *worms*, &c.

PLAT IV.



This Plate represents the Body cut open in order to display the Urinary Organs.

CHAPTER III.

ON THE SECRETION OF URINE AS CONNECTED
WITH THE CIRCULATION OF THE BLOOD.

HAVING alluded in the 1st chapter to the erroneous notions of persons unacquainted with the human structure, as to the separation of the fluids from the solids, I shall here endeavour to make that subject clear, by such general and plain descriptions as may be easily understood.

I have already said, that the *food* and the *drink* taken into the mouth pass down *one* common passage (*the œsophagus*) into the *stomach*; they are there mixed together and converted into a substance called *chyme*; which being propelled from the *stomach* into the *intestines*, becomes incorporated with the *bile*. After this there is separated from the mass a white fluid, which is called *chyle*;

and which imparts all the nutritive qualities to the *blood*, into which it is carried by the *absorbing vessels* or *lacteals* (see Chap. II.) destined for this particular purpose; while all the coarse refuse materials are propelled on through the intestinal passage.

Ignotus, in his Medical Commentary, thus familiarly writes:—

“ The stomach is the *kitchen* that prepares our discordant food, and which, after due maceration, it delivers over by a certain undulatory motion, to the intestines, where it receives a further concoction. Being now reduced into a white balmy fluid, it is sucked up by a set of small vessels, called lacteals, and carried to the thoracic-duct. This duct runs up the back-bone, and is in length about sixteen inches, but in diameter it hardly exceeds a crow-quill. Through this small tube, the *greatest part** of what is taken in at the mouth passes; and when it has arrived at its greatest height, it is discharged into the left jugular vein, at the angle of the subclavian

* The remaining portion passes through the bowels.

vein; when mixing with the general mass of blood, it becomes, very soon, *blood itself*."

As it appears that the nutriment is conveyed into the *blood* to be distributed to every part of the system for our continual support, it will now be necessary to describe the manner in which its thinner or watery portions (constituting the *urine*) are separated from it, by the *kidneys*; and Plate IV., with its references, will assist in this object.

The *kidneys*, E. E., are two somewhat oval viscera, situated behind the *intestines*, one on each side of the *spine*, and are of a dark red colour, resembling a bean in shape; —the seed of one species of this vegetable so approaches to these organs in shape, as to be called the kidney-bean. See Plate IV.

The *kidneys* communicate with the *aorta*, A. A., by means of arteries, called the *emulgents*, B. B., which ramify most beautifully through these organs; and it is by these passages they secrete or draw off (by their peculiar power for this employment) the poor and useless fluids from the blood; which they then propel on to the *bladder*, C., through

two ducts, leading from the *kidneys*, called the *ureters*, D. D., (as will be seen in the plate,) and which pierce the *bladder* at the lowest part near its neck. This fluid is known by the name of *urine*, which, by accumulating in the *bladder*, stimulates its coats to contract and expel it*; this necessary relief should be sought for, at least three or four† times in the day; nor should any motives of delicacy ever prevent this, when-

* “When the urine is too long retained, it is not only resorbed, or taken up again into the mass of fluids, but by stagnating in the bladder it becomes thicker, the more watery parts flying off first, and the more gross and earthy remaining behind. By the constant tendency which these have to concreate, the formation of stones and gravel in the bladder is promoted; hence it comes to pass, that indolent and sedentary people are much more liable to these diseases than persons of a more active life.”—Dr. Buchan’s Domestic Medicine.

† “Retention of urine in the bladder, if complete, is a very serious complaint, requiring prompt assistance; which, if deferred, leads to alarming or fatal consequences. The bladder, long distended, loses its power of contraction, and thus is restored with difficulty. It is extremely apt to become irritable and inflamed, and thus falls into a sort of gangrenous suppuration, of which I have seen several instances.”—Practical Treatise on Diseases of the Kidneys and Bladder, by John Howship, Esq.

ever the inclination to discharge it is felt, as a neglect of this duty has led to diseases of the most disastrous nature. I remember that Sir Astley Cooper used to relate, (in his Lecture on "*Irritable Bladder*,") an account of a young gentleman, who was on the point of leaving a party of ladies, with the intention of emptying his *bladder*, just at the moment when they called their carriage to the door ; thinking at this time that it would appear indelicate to leave them, he got into the carriage in this uncomfortable state, and rode several miles with his *bladder* full, and in the greatest misery. At the end of the journey he found, much to his astonishment, that he could not pass a single drop of *urine*, and he was compelled to send for a surgeon, who drew it off by means of a *catheter*, by which he obtained immediate relief; but unfortunately an irritable *bladder* was the consequence; *inflammation* followed, the *suppurative process* commenced, and the unhappy sufferer died from exhaustion ; thus showing that Nature's laws are perfect, and

that we are not warranted in either the neglect or the violation of them ; but, on the contrary, in a piece of workmanship so intricate, and at the same time so delicately framed, our most tender care for its preservation is necessary.

Ignotus again justly remarks, that—

“ A thousand other operations are carried on in the animal machine, but which it will be unnecessary to mention in this place, they being only secondary agents to the stomach and intestines. Were it possible for us to view through the skin and integuments, the mechanism of our bodies, after the manner of a watchmaker when he examines a watch, we should be struck with an awful astonishment ! Were we to see the stomach and intestines busily employed in the concoction of our food by a certain undulatory motion ; the heart working, day and night, like a forcing-pump ; the lungs blowing alternate blasts ; the humours filtrating through innumerable strainers ; together with an incomprehensible assemblage of tubes, valves,

and currents, all actively and unceasingly employed in support of our existence, we could hardly be induced to stir from our places !”

“ Strange ! that a harp of thousand strings
Should keep in tune so long.”—*Watts.*

For the information of those of my readers who are subject to diseases of the *kidneys* or *bladder*, I shall conclude this chapter with a list of the component parts of the *urine*, which, according to the description of Berzelius, contains *water*, *urea*, *sulphate of potash* and *soda*, *phosphate of soda* and *ammonia*, *hydrochlorate of soda* and *ammonia*, *lactic acid*, *acetate of ammonia*, some animal matter soluble in spirits, some insoluble earthy phosphate with a little lime, *uric acid*, *silicium*, and the *mucus of the bladder*.

CHAPTER IV.

OF INDIGESTION AND COSTIVENESS.

IT is not my object to treat of all the diseases connected with indigestion* and cos-

* Indigestion, or *dyspepsia*, signifies some derangement of the alimentary organs, more frequently arising in the *stomach* itself, in consequence of irregularity of life, such as indulging too much in spirituous liquors, or high-seasoned food, &c. In some it is caused by a deficiency in the secretion of the *bile*, or *gastric juice*, or by want of proper action, or diseases of the *liver*, the want of exercise, &c. &c.; and may be suspected by a bitter disagreeable taste in the mouth in the morning, with foul tongue and fetid breath, the want of appetite, a depraved taste, heart-burn, flatulence, thirst and fever, sometimes shortness of breath, and generally costiveness. Dr. Paris says, "I define indigestion to be a *primary disease, in which one or more of the several processes by which food is converted into blood are imperfectly, or improperly performed in consequence of either functional aberration, or organic lesion;*" and Dr. John Mackintosh, in his *Elements of Pathology*, p. 177, describes it thus "The first symptoms of indigestion

tiveness* in this small work, but to refer to those that more immediately require the particular mode of practice here advocated; and I shall beg to call the attention of my readers to that state of constipation which is caused by an accumulation of hardened *fæces* or *scybalæ*, collecting in the *cæcum*, or the first of the large intestines. By reference to the plate it will be easily perceived, that the office imposed on these parts, particularly at the *ascending* portion of the *colon*, must, at all times, be much more difficult than in any other part of the alimentary canal; inasmuch as it has to

are a sense of fulness and uneasiness in the region of the stomach, arising either from too great a load of indigestible food, or from flatulent distension of the stomach; frequent acid eructations, constipation, loaded tongue, and some thirst. Sometimes sore throat is complained of; it is difficult to keep the hands and feet in a sufficient degree of heat; and occasionally severe headach takes place; these symptoms may steal on slowly, and from being only felt occasionally, are neglected."

* *Costiveness* is sometimes constitutional, but generally symptomatic, and signifies a difficulty in voiding the *fæces*, which are hard and dry.

overcome the obstacles which the gravity of its contents opposes to its action, or, in other words, having to perform the whole of its task up, instead of down hill; and that the digested matter which hitherto had been of a softer texture, has now assumed the character of a more dense compact structure. This may, in many cases, have been accumulating perhaps not only for many days, but many weeks, aggravating the difficulty every day, as the bulk increased and the *peristaltic action* of the intestine decreased; whilst, probably, at the same time, *some small liquid evacuations* have been daily passing, which served only to lull the mind of the patient, make him careless as to remedies, and finally lead him on to an irrecoverable state of ruined health.

This is one of those cases wherein I shall direct the attention of my reader to the necessity of using *Lavements*, as, with the proper apparatus, and a sufficient quantity of warm water (blood-warm*,) say from

* About 100° of Fahrenheit's thermometer.

one to two quarts, we possess not only the means of softening the retained fæces, but by the power of these instruments, we are enabled gently to excite the muscular fibre of the gut, by which its energy is restored, and the power of expulsion again brought into action ; besides which the warm water acts also as an internal fomentation, and increases the *secretions** of the intestinal tube throughout its whole length, by which any tendency to inflammation and fever is prevented, or if established may be cured.

This obstructed state of the bowels, as above described, although not the entire

* "A deficiency of secretion in the alimentary canal is the cause of many of the diseases to which human beings are subject. The internal surface of the intestines is lined with glands ; the tube itself, on an average, is twenty-seven feet in length, and three inches in circumference ; thus there are here about a thousand inches of surface from which, in health, continual secretion proceeds. What then must be the result of allowing such an extensive surface to remain inactive ? Of course, the production and continuance of irritation and fever!! To excite the intestinal canal to action, therefore, should be one of our first objects."—Sir Astley Cooper's Lecture on the Treatment of Inflammation, p. 25.

cause of indigestion, is by far the most frequent, and most to be dreaded, and may generally be known by the following symptoms:—a confined state of the bowels, difficulty of breathing, loss of appetite, hardened state of the *abdomen*, flatulency, nausea, headach, fever, fetid breath, &c. &c.

Another cause of indigestion arises from the want of attention to a proper system of *dietetics*; indulging in too great a quantity of corned or dried meats, (sometimes cooked to hardness); eating too much solid food, without a proportionate quantity of seasonable vegetables*, and a sufficiency of mild and proper fluids; indulging too much in astringent wines; in not adopting a regular period for meals; and following sedentary occupations, &c. &c. Costiveness (from whatever cause it arises) may be considered as the forerunner and the foundation of most

* The diet of such as are of a costive habit ought to consist a good deal of vegetables and ripe fruits, and their ordinary drink of malt liquors.—Thomas's *Practice of Physic*, 9th edition, p. 755.

of those disorders that render our lives wretched or terminate fatally, an assertion fully proved by the experience of past ages, and which reminds me of an anecdote I formerly heard from Sir Astley Cooper, whilst I attended his lectures, viz. :—

An old Scotch physician, for whom I had a great respect, and whom I frequently met in consultation, used to say to me, as we were about to enter our patient's room together, “ Weel, Misther Cooper, we ha’ only twa things to keep in meend, and they ’ll searve us for here and herea’ter ; one is auways to ha’ the fear o’ the Laird before our e’es, that ’ll do for herea’ter ; and th’ t’other is to keep our boo’els auways open, and that ’ll do for here.”

Females, in particular, should be careful to attend to those causes which are likely to derange their digestive organs, as they have much more to encounter, in the preservation of their general health, than the other sex, and less constitutional power to resist the havoc of disease ; and whilst I refer to the

habits of females, I must not omit to mention, that a false notion of delicacy prevails very much in boarding-schools, both as regards the confinement to study, and the dislike to its being known that the calls of nature require to be relieved. Owing to this circumstance, the regular functions of these organs become interrupted, and in consequence they soon become the seat of disease.

Nothing, also, contributes more than costiveness (from whatever cause it proceeds*) to the obstruction of the monthly discharge, upon the regularity of which depends the future happiness or misery of females. Let me, therefore, warn mothers, and all those who have the care of young females, to be

* Costiveness is a derangement to which persons of a sedentary habit are particularly liable; it is also frequently occasioned by neglecting at the usual hour to go to stool; and is produced in those persons who are subject to profuse perspiration; by eating too much solid, dry food, without a sufficient quantity of vegetables or fluids; but none suffer from it so much as eaters of opium.

at all times acquainted with the daily state of their bowels.

Females in this country are more subject to constipation than males, owing both to constitutional weakness, and to their employments being of a more sedentary nature, and seldom united to active bodily exertion. The effects of constipation are much more injurious to females, owing to the various constitutional changes to which they are subject, particularly at the menstrual periods, and during pregnancy. At this latter period, the large bowels are subjected to much derangement, both as to position and function, from the pressure of the enlarged womb. Indeed, the whole of the alimentary canal, including the stomach, is liable to disorder from this cause; and if the use of lavements is more advantageous in any one case, or at any one particular period, than at another, it is under these circumstances that I should most strongly recommend it. I need not attempt to show, (what every mother

must be acquainted with,) that purgative medicines at those times generally induce bearing-down pains, aggravate the costive habit, and are very often the cause of premature labour. I am borne out in this assertion by the observations I have been enabled to note during an extensive obstetric practice, wherein I have had repeated opportunities of recommending the frequent use of *Lavements* to pregnant persons, who were before subject to miscarriages, and in ten cases out of twelve, they have afterwards gone their full time, and had living and healthy children. I am likewise indebted to several of my medical brethren for a corroboration of these facts.

The commencement and cessation of the menstrual discharge are periods when females ought particularly to guard against powerful drastic purges; a mild aperient plan of treatment is then necessary, to preserve a regular state of the bowels, and, by rousing the inactive state of the digestive organs, which so generally characterizes both

these periods, to prevent those intestinal accumulations, which so often prove the foundation of numerous diseases, and often lead to a fatal termination. And here, again, in order to guard against such circumstances, *I do most earnestly advise* the daily use of a warm-water *Lavement*, or other more active injection, as the case may indicate.

Without enumerating diseases, I scarcely know of any, even the most trifling, that do not depend as much or more, on a proper action of the bowels, as on any thing that can be done besides towards their alleviation or cure; and in the healing art this forms the first and most important practice, which no one can with impunity neglect.

Most of the diseases of females, (whether they arise at that delicate period when first the *menses* should or do appear, or during pregnancy, child-birth*, suckling, weaning, or when the menstrual discharge ceases,) have

* Ten cases out of twelve of death in child-bed, may be traced to the ill effects of costiveness during pregnancy, when females are more liable to it than at any other period of their lives.

their origin in constipation, or in some derangement of the digestive organs.

Such, then, being the consequences to which we are rendered liable, by neglecting the state of our bowels, it becomes an object of serious reflection, to ascertain the best means of affording relief, and preventing those sufferings to which we are all exposed, and which, when such means are neglected, often lead to serious consequences.

The human species are subject to upwards of *twelve hundred* varieties of disease, out of which above *one thousand* are more or less caused by some derangement of the *digestive organs*; let this fact warn my readers of the danger of neglecting their condition, and at the same time lead them to a consideration of the most efficient means of preventing as well as curing disease.

CHAPTER V.

OF THE PREVENTION AND CURE OF INDIGESTION
AND COSTIVENESS.

LET me observe, then, as I noticed in a preceding chapter, that as the food passes through the alimentary passage in twenty-four hours* in the *healthy* subject, our duty is to take as much care as possible to protect our health, by attending to this

* If we followed more closely the dictates of nature, by abstaining from pernicious diet, rose early, went to bed early, and in all respects were regular in good habits, the bowels would be generally regular also in the period of their action; the deviations from health may be more frequently attributable to the depravity of our customs, than to any original defect in our constitutions.

state of the bowels, and preserving that regularity of their functions which is so essential to our present, as well as our future, enjoyment of life. As, from neglect, or from constitutional debility, or some other cause, we are liable to *constipation*, and purgatives, alone, not answering at all times the desired effect ; and not being acquainted with any other medicines that will do so,—I trust that the use of *Lavements* will be more and more resorted to, they having been found uniformly to give the safest and most efficacious relief. This recommendation does not arise from speculative notions, but from my repeated conviction and experience of their utility, derived from an extensive practice of *eighteen years*, during which time I have had many opportunities of remarking the great advantages derived from having constant recourse to them.

The following extract from ‘ An Oration delivered by Dr. Burne, before the London Medical Society,’ will show the important utility of injections as a means of restoring

the alimentary system to its natural state of activity :—

‘ An undue retention of the intestinal excretions is another source of disorder and of disease arising out of civilized life. It is produced by affections of the mind, by indigestion, by inattention to the calls of nature*, by mechanical obstruction, and from organic disease ; which last is frequently excited by the retained excretions themselves.

‘ The undue retention of the excretions takes place in the large (or lower) intestines ; for, until the excrementitious matter arrives here, there is no reason to believe that its propulsion is arrested, although it may be less quick at one time than at another.

‘ The undue retention of the excrementitious matter allows of the absorption of its more liquid parts, which is a source of

* Mr. Locke’s recommendation is good, viz. “ to *solicit* nature, by going regularly to stool every morning whether one has a call or not.”

great impurity to the blood; and the excretions, thus rendered hard and knotty, act, more or less, as extraneous substances, and by their irritation induce a determination of blood to the intestine and to the neighbouring viscera; which ultimately ends in inflammation and organic change of the bowel itself.

‘It has, also, a great effect on the whole system: it causes a determination of blood to the head*, which oppresses the brain, and dejects the mind; it deranges the functions of the stomach, causes flatulence, and produces a general state of discomfort.

‘In civilized life, then, the causes which are most generally and continually operating in the production of disorder and of disease, are, affections of the mind, improper diet, and retention of the intestinal excretions.’

The habitual and indiscriminate use of purgative drugs can only afford a tempo-

* The many cases of sudden death, by apoplexy, &c. are mainly attributable to these causes.

rary relief by unnaturally stimulating* the digestive organs, which they exhaust of their secretions, and thereby render them incapable of performing, even with this repeated stimulus, their proper functions with that degree of energy requisite to support the body in health.

The great utility of *Lavements*, or domestic clysters, the use of which has so long been practised in France, and almost every part of the Continent, is now so far established in the opinions of the medical profession in this country, as generally to form part of the directions of our most eminent practitioners to their dyspeptic or bilious patients.

An eminent physician, in his work on the means of obviating and treating the varieties of costiveness, speaking of intestinal injections, says, ‘ In no country of Europe is the class of remedies termed *Lavements* or

* Stimulants require a constant repetition, with an increase of strength, or they lose their effect, as is the case with dram-drinkers, who go on till they destroy life.

clysters so seldom used as in England. In France and Italy this remedy is preferred, in cases of costiveness, to the exhibition of purgative medicines by the mouth; and it is certainly very preferable to those cathartic drugs which disorder the organs of digestion, or hurry the chyle through the small intestines. In France, the lavement apparatus is deemed as necessary an appendage to the toilet as the tooth-brush or water-jug; it being common in that country for males and females to use an injection every forenoon;’ and the same author adds, ‘It has been said, and perhaps with truth, that the females of France are more healthy than those of Great Britain, which is attributed by a late writer to their keeping “the intestinal canal in a regular state, by the occasional and almost daily exhibition of a domestic lavement.”’

The following observations are from the pen of the celebrated Dr. Baillie:—‘Injections do not appear in this country to be so highly appreciated as they deserve, although

on the Continent their advantages are extensively acknowledged, and they constitute no trifling part of the practice of medical men*. It is remarkable that they are not in more general use, when we reflect how numerous are the complaints produced by a confined state of the bowels, and how quickly they are relieved by a removal of that cause. The occasional employment of injections is certainly the most convenient and comfortable way of obviating so frequent a source of misery and pain; and as injections neither produce temporary constitutional disarrangement, nor render the habit so accustomed to their use that they may not be at any time discontinued, the same objections cannot be urged against their employment which are so often made to other remedies; whilst

* While our legislative enactments permit medical practitioners to charge for the quantity of medicine they send to their patients, instead of giving a written prescription as they do in France, the use of *lavements* cannot be so great here as in that country, where they seldom have occasion for medicine, relying almost entirely on the better advantages of this practice.

the simplicity of their formation, and the facility with which they can at all times be had recourse to, are arguments in favour of their adoption. In a medical sense, they are invaluable: during the attack of inflammatory disorders, and various other complaints to which the bowels are subject, when the stomach rejects medicines of every kind, and when all other remedies prove quite ineffectual, how often do we find a common injection of the most simple kind produce the most salutary results*; and by unloading the lower bowels, by clearing a passage for flatulent collections, and by acting as a kind of internal fomentation, to the whole disordered canal, suspend the most distressing irritation, and produce tranquillity and rest.

‘ In a domestic point of view, they are not much less important: and I speak with

* Sir Astley Cooper, in his lectures, used to say, that in addition to mild aperients occasionally administered, “ the use of *injections*, and the warm bath, are the best means of restoring the secretions of the digestive organs.”

confidence when I state, that in all the cases of *hemorrhoids* or *piles*, in which I have been consulted, and of *fistula*, for which it has been necessary to operate for their cure, I scarcely remember one which could not be ascribed to a long and habitual neglect of the bowels.’

By the injection of warm water* merely, much good may be done in regulating the bowels of those persons who are disposed to costiveness; and I can with confidence affirm, that if this plan is commenced in the early stage of this and other disorders, and *persevered in daily*, gradually increasing the quantity of the fluid, it will, in nineteen cases out of twenty, *completely succeed*. . If, from the colour of the evacua-

* This system of medicine is of more importance than is generally imagined. Clysters serve not only to evacuate the contents of the belly, but also to convey very active medicines into the system; opium, for example, may be administered in this way, when it will not sit upon the stomach, and also in larger doses than at any time it can be taken by the mouth.—
Dr. Buchan’s Domestic Medicine.

tions, or from any other symptom, it is discovered that the cause of the disease is in the *stomach* or small intestines, and the *stomach* is too weak or irritable to receive aperient or other medicines, such medicines, in stronger doses, will have the same effect, to a certain degree, if given in warm water by way of enema, as when taken into the stomach; which effect is produced chiefly by means of the absorbents mentioned before, as is proved by many actual experiments. Besides which, if a sufficient quantity of fluid is thrown into the lower bowels, they will become so distended that the valve of the *cæcum*, alluded to in page 15, will be thrown out of its usual form, and allow water to be forced into the small intestines. See extract from Dr. Arnott's "Elements of Physic," where, speaking of the *stomach-pump*, he says, 'Useful as the pump may prove upon occasions, in evacuating the *stomach*, its office of injecting the *enema* is still more important, and recent experience

seems to shew that such injection may become a remedy of more extensive utility than has yet been suspected.

‘ From an erroneous opinion, that what has been called the *valve of the cæcum*, acts as a perfect valve, allowing of the passage downwards only, few practitioners have ventured to order much liquid to be injected, for fear of overstretching the lower part of the intestines; and the possibility of thus relieving by injection, disease situated above the supposed valve, has scarcely been contemplated. It is now ascertained, however, that fluids may be safely thrown in, even till they reach the *stomach*. Perhaps few, if any, cases of obstruction of the bowels would resist the force of penetrating water, so that a mechanical remedy of certain effect may, in many cases, be substituted for the *drastic purgatives* and *pernicious bleedings* now used, and often in vain. From what has been said above of the *abdomen* and intestinal canal, it appears that an injection tends to spread itself with singular uniformity

over the whole. This tendency may be rendered obvious to sight, by throwing a sheep's intestine, recently extracted, into a bucket of water, and then pumping water in at one end—a stream will issue strongly at the other end, although several feet distant, almost immediately, and without any immediate part having *become very sensibly tense*—of course in the living body, in cases of spasm or obstruction, the liquid must be thrown in against resistance *very gradually**. That case is called *intus-susception* of the bowel, in which an upper portion falls, or is received into a portion below, as one part of the finger of a glove may be received into another part—and the receiving portion of the bowel, mistaking the received for descending food, holds it fast. This occurrence forms a complete obstruction, and has generally proved fatal. Many infants with irritable bowels *die of it*. Now a *copious*

* One very strong inducement among many others, why the author recommends the instrument called the Clysmaduct, hereafter spoken of, in preference to the syringe or pump.

enema, such as we have described above, is *almost a certain cure* for this affection. The liquid advances until it reaches the part where the portion of gut has been swallowed by the gut below; and as it cannot pass without pushing the intus-suscepted portion back to liberty, it effects a cure.'

I may now refer to the danger we are exposed to, either from improper treatment, or from neglecting the state of the bowels, and which I cannot perhaps better exemplify than by mentioning the case of a female whom I was called to examine after death, some years ago, during my practice in Westminster. This female had died in child-birth, from some unknown cause, when, to the no small surprise of myself and assistants, we discovered the *cæcum* distended to more than three times its usual size. On dividing its coats, together with those of the ascending portion of the *colon*, we found the whole of the former, with about one-third of the latter, filled up with a hard clay-like substance, firmer in texture

than any soil or earth of the heaviest, and most compact nature I ever remember to have seen. The weight of the substance was seven pounds and three quarters ; and, from its general appearance, I should suppose had been collecting for many months, if not years; and still, strange to say, from all that I could learn of the relatives of this person, no suspicion of any thing of the kind was even entertained, nor had she ever been known to complain of irregularity. A sort of furrow or depression existed on one side of this mass, by which the thinner excrements were permitted to pass. The cause of her death was from mortification of the parts, which, no doubt, had been occasioned by inflammation, induced by additional excitement during the pains of labour.

I think no other remark is required on this case, than that this patient had either totally neglected the state of her bowels, or that improper or inefficient means of relief had been resorted to. And whilst I speak of improper means, I wish to be understood

as referring to an indiscriminate use of purgative medicines, without having the recommendation of a medical man; *one* instance *only* of which I shall relate.

A woman, a few years ago, died in one of the Borough Hospitals, she had been confined there for several months, complaining of severe and constant pain in or about the *stomach*, with a considerable hardness and enlargement on the upper part of the *abdomen*; her bowels were always much confined, and, without the aid of castor oil, no motions could be procured for a week or ten days, or more, at a time: and this had been her state for some years. On examination of the body after death, the stomach was found to contain a large compact ball, in circumference nearly eighteen inches, which was so firm that it was difficult to divide it with a saw, and, from its peculiar colour and appearance, more difficult to determine its precise nature. On conversing with some of her relations, it was ascertained that the patient, who had always been of a costive habit, had accustomed herself almost every morning, to take a quantity

of *magnesia* in her tea, considering this to be the *mildest* and most *innocent* purgative medicine. And who would blame her?—who would say that this could do harm? These questions I will presently answer; but I must first observe, that all purgative medicines are not suitable for the relief of all intestinal or *stomach* complaints; for instance, *aloes* have very little effect on the *stomach* or small intestines, but irritate particularly the lower bowels, and are frequently the cause of *piles*; *rhubarb* exerts its influence chiefly on the *stomach*; preparations of *mercury* have a specific action on the *liver*, &c. &c.; and yet they all purge, and so will a roasted apple or a French prune; and if the only object is to purge, either of the two latter would answer the purpose as well as the former, or any other perhaps of a hundred varieties more, each exerting their influence over different organs in different ways*. It should

* Hence the advantages of living in a country abounding with men well educated in medical science, who are at all times at

also be recollected, that medicines act differently on the same persons, according to the dose administered: for instance, *ipecacuanha*, in very minute doses, acts as a *sudorific*; in large doses, as an *emetic*; *antimonial* medicines the same. *Rhubarb*, in small doses, acts as a stomachic; in larger doses as a purgative. *Magnesia*, combined with lemon-juice, vinegar, or acids of any kind, acts as a *brisk aperient*; but when taken alone, unless a sufficient quantity of acidulated matter exists in the stomach at the time, it becomes an *absorbent*. This was the case with the patient mentioned above; and the *magnesia*, instead of purging, collected from day to day in her stomach with the natural slime and moisture of its coats, which, acting like glue, combined it together, till it increased to the enormous size here spoken of, and ultimately caused her death.

Thus I have shown that unnatural accumulation, and who are able to discriminate by external symptoms, where and what is the precise nature of the disease, and which are the suitable medicines for its relief.

mulations occur both in the *stomach* and intestines, and that they both arise either from neglect or mismanagement*. Not that hardened substances such as I have mentioned, *often* form in the stomach or bowels; on the contrary, I believe that they are of rare occurrence. I only refer to the above instance to show what injurious consequences may, and sometimes do, arise from the too common practice of relying for relief on what are termed *common, innocent, mild, and safe remedies* †.

“ I was well—

Wished to be better—

Took physic—and died.”

Epitaph on an Italian Count.

But collections of hardened *feces* in the

* Man is a piece of machinery of the most complex nature, abounding in innumerable intricate divisions, each depending on the other for the uniformity of its action; and if the healthy function of any one part is imperfect, in consequence of neglect or mismanagement, the whole must suffer.

† *Innocent* and *safe* are dangerous terms, as applied to physic. Remember that *judgment* is necessary to determine why they are so; their appearance, or general character might mislead you.

large intestines, such as I before detailed, are unhappily met with in the daily walk of every medical practitioner; and it is time that the attention of the profession, as well as of every individual, should be aroused to seek relief by those means that are most likely to succeed in preventing or curing these maladies.

Before I enter on the mode of treatment I intend to recommend in cases of this nature, it will be proper to observe, that the *colon* (independent of the obstruction arising from its natural *ascension* on the right side) is divided into several chambers by means of transverse bands, each of which forms a ready receptacle for the lodgment of excrementitious matters, and which, in the absence of sufficient *peristaltic* power, often becomes much loaded, and permits the fluid, or thinner portions which have been stimulated by the impetus of purging doses, to pass on without interfering with these retentions.

Again, with regard to the accumulation of *fæces* in the large intestines, I remember

the case of Miss P., a highly respected lady, who was placed under my care in Monmouthshire, the subject of diseases of the most complicated and distressing nature. She had been confined to her bed for five or six years, and had been attended, during that period, by men of the highest medical character. On my first visit to her, I made every inquiry into her sufferings; and amongst the many that were described, my attention was directed to a large painful swelling, somewhat of an oblong form, at the lower part of the right side of the *abdomen*, and which had been described to her as a rupture. I had, however, every doubt of this; and on learning further that no figured motions had been passed for a long time, I believed that she had stricture of the *rectum**, which had caused a collection of *fæces*, and with this view I commenced the practice of adminis-

* The prediction turned out, on *post-mortem* examination, to be correct, as there existed a thickening of the coats of the intestine, which had considerably reduced the natural passage, and had partly contributed to the above-described collection.

tering twice every day an injection of warm water, with a small portion of olive oil in it, beginning with half a pint, and gradually increasing the quantity, till, after a few weeks, I was enabled, by means of the newly-invented apparatus, to throw up as much as three or four quarts at a time, and it was not until I could inject about three quarts, that the hardened matter began to break down and come away piecemeal, day by day, the swelling and pain at the same time gradually diminishing, the parts becoming soft and natural, and the motions assuming a healthy appearance. Notwithstanding the favourable change in this particular, the lady fell a victim to other maladies affecting the vital organs, from the pain of which, together with long-protracted confinement, general wasting of the body, loss of appetite, &c. she ultimately sunk. I cannot finish the relation of this case without recurring to the fact, that remarkable delicacy had characterized this lady from her earliest years, and that she would not allow it to be known, even to her

own sex, that her bowels required relief, and not even her own mother was ever permitted to be acquainted with those facts. I have no hesitation in affirming, that all her diseases in subsequent life, as well as her untimely and lamented * death, entirely originated in neglecting the state of her bowels.

In cases of the above kind, where much tumefaction and tenderness are present, it will be proper to have recourse to warm fomentations with poppies and chamomile flowers; and, if much pain be felt, I should advise the application of from fifteen to twenty leeches on the part, again applying the warm fomentation on their falling off: this practice, combined with the use of warm *Lavements*, and repeated small doses of castor oil, will be found to be the most advantageous.

* The sufferings of this amiable and pious young lady excited the sympathy of persons of every rank for miles round her residence. Her virtues will live for years to come in the memories of the wide circle of acquaintance who lament her untimely death.

Independent, likewise, of the injury sustained by the bowel itself in consequence of these unnatural collections, I must remind my reader of the mischief they impart to the neighbouring organs, especially the *liver, kidneys, small intestines, stomach, bladder, uterus, great blood vessels, &c.* by occasioning pressure on those parts, interrupting the circulation, impeding the passages, producing irregular breathing, &c.; indeed, it would be impossible to enumerate all the evils and all the diseases, which, directly or indirectly, proceed from indigestion and retention of *fæcal* matters in the bowels; nor shall I go too far, if I affirm that seven-eighths of the diseases to which these organs are liable (independent of those produced by accident) depend upon these causes.

One more noxious condition arising from inattention to the bowels which I shall allude to, is the fetid and morbid state of the long-retained substances, the particles of which are taken up by the absorbent vessels and carried into the blood, proving highly detrimental to the frame, and injurious in all

stages of illness, particularly in fever, where every thing that is pure and free from putrescency is of vital import.

I shall next inquire of my reader, how he is to know, or by what means can he determine, as to the healthy state of the digestive organs ? and I reply for him, that as the wheels of a time-piece are necessarily depending one on the other in their action, in order to effect their combined result on the face or dial; so are the abdominal viscera one part depending on another, and influencing every part of the human frame. It is thus scarcely possible for any one part to be materially affected, without some deviation from health resulting from it, either by pains or aches, want of rest, falling off of the appetite, pale or flushed countenance, fetid breath, or more than naturally fetid evacuations; weariness, drowsiness, dryness, or unusual moisture of the skin; cutaneous eruptions; cold chills, cold feet, flatulence*, headach,

* " Flatus in the stomach and bowels, or in the bowels alone, is now and then the sole symptom of indigestion, of which the patient confesses himself sensible; and this is, perhaps, de-

nausea, dimness of sight, unusual thirst, dry and white tongue, quick pulse; with many other symptoms that always clearly indicate bodily disorder. Besides these, much is to be learned from the colour, consistence, odour, and quantity of the motions, which are soon known by an observing person.

With regard to the quantity of the *fecal* discharge, little can be said with certainty, as this must depend on a great variety of circumstances; in the first place, on the quantity of food consumed, whether most of vegetable or animal; next, as to the exercise taken, for on the proportion of this generally depends the quantity of vapour, or perspiration that is lost daily, and which being supplied by the food and drink, must neces-

tected only on attentive inquiry; but it may be received as a sufficient proof of an unhealthy condition of the digestive powers. In this case the stomach and bowels are very deficient in muscular tone, and a full meal with certainty occasions a distressing feeling of weight, and general distention, which latter symptom is sometimes very painfully oppressive."—*Treatise on Gout; including Considerations on a Morbid State of the Digestive Organs*, by Charles Scudamore, M. D. p. 88.

sarily diminish more or less the bulk of that which is to pass off by stool. It must depend also on the state of digestion, as to what part or parts shall be kept back, from the want of peristaltic power of the bowels, or from other causes. Then as to the colour, much has been said on this subject, more than can be depended on ; for although it is generally a useful guide, still it is likely to lead us into error, as the colour depends very much on the nature of the food we take, the age of the patient, and the greater or less quantity of bile* mixed up with it. An eminent lecturer in the Borough Hospitals used to observe ‘ that the stools should be as yellow as a guinea ;’ but a dose of *rhubarb* will turn them yellow ; and a dose of *aloës*, or *steel*, will generally turn them black. So that if we entirely depend on the

* When the bile is obstructed in its passage through the common *bile duct* leading from the *gall-bladder* into the *intestines*, by *calculus*, spasm, or any other derangement, then the stools will be found to be of a light clay colour, and the skin will assume a yellow tinge.

colour, we may be misled, and be induced to resort to improper treatment.

Again, as to the quantity evacuated, it will be well to keep in mind that only *one-fifth* of the food (by weight) that we take, passes off by stool,—the larger part by sensible, and *insensible* * perspiration. I state these facts in order that my readers may not be searching for more than they can find, nor be led into disappointment or perplexity.

The difficulties then that arise (to enable persons uneducated in medicine to judge rightly of their own state,) should warn them of the danger of trusting too much to their own opinions; at least, those who exercise a system of medicine on themselves, without the opinion of a professional man, should remember ‘that a little learning is a dangerous thing.’ Rather let your practice be of that safe kind, that shall leave

* Enter the confined bed-room of a person before he rises in the morning, and the delicate membrane which is the lining of the nose, will soon be sensible of the escape of *insensible perspiration*.

you no consequences to dread. I am confident the recommendation I so earnestly give, of depending on *simple injections*, is the best domestic practice, it removes so many diseases, without the possibility of injury; for, by them, disease is not only prevented, but cleanliness promoted, and the necessity of disagreeable medicines much less called for.

CHAPTER VI.

OF DIET IN INDIGESTION AND COSTIVENESS.

BEFORE speaking of those diseases wherein the particular use of *Lavements* is necessary, it will perhaps be better that I should say something on dietetics. In doing so, I shall confine myself to the recommendation of those alimentary substances, which are generally best suited to the digestive organs, and place in opposition to them those of an indigestible or improper character.

I need not attempt a fuller explanation of the term *digestible*, than by saying that those substances which are easily dissolved in the *stomach*, and rendered fit and proper for the nourishment of the blood within the usual time, and without difficulty, are so denominated, and *vice versâ*.

It is impossible to lay down a correct rule as to what food, or in which way cooked, or whether animal or vegetable, hot or cold, fat or lean, dry or moist, &c.*, may prove the most digestible on all occasions, and in every case, without a previous knowledge of the constitution, habits, age †, sex, &c. of the patient. I shall therefore only make a few remarks on those substances which appear to yield the most nutritious matter, with least exertion to the digestive organs. And I believe I cannot do better, than refer first to the leading article of diet.

BREAD.

Bread, or, as it has been not improperly

* “*The best general rule for diet, that I can write, is to eat and drink only of such foods—at such times—and in such quantities, as experience has convinced you agree with your constitution—and absolutely to avoid all others.*”—Dr. Kitchiner’s *Art of invigorating and prolonging Life*, p. 33.

† “Cornaro found that as the powers of his stomach declined with the powers of life in general, it was necessary that he should diminish the quantity of his food: and by so doing, he retained to the last the feelings of health.”—Abernethy’s *Surg. Obs.* p. 71.

called, "the staff of life *." There cannot be two opinions entertained as to the nutritious qualities of this important article of our food; we know that it is the chief support of the healthiest of our isle, the country labourer and his family—who seldom if ever require a dose of *aperient* medicine; and if they do not require the use of medicine, it sufficiently proves that this food is *digestible* as well as *nutritious*: they are aware from experience that *brown* † bread is a laxative, and it is well known also, that the laxative part is the *bran*, whilst the finer part, or flour, is of a mucilaginous, starchy, astringent, and nutritive quality. Those who are

* Two countrymen being in conversation, one said to the other, "I have two persons to pay, the baker and the publican, and have only money enough for one; to which should I give the preference?"—"Why," said his friend, "the baker, certainly, for bread is the *staff of life*."—"True," replied the inquirer, "bread is the *staff of life*, but beer is *life itself*, and, therefore, I have resolved to pay the publican."

† The *bran* contained in brown bread produces purging in consequence of its mechanical action on the coats of the intestines, whereby their *peristaltic* action is increased.

in search of health, should know that bread ought to be well baked, and *stale*, as *new bread* swells like a sponge in the *stomach*, and causes much inconvenience to the dyspeptic patient.

POTATOES, &c.

Of *potatoes*, I should urge their nutritious, as well as their digestible properties, on the same grounds, that the poor of our sister kingdom (than whom a finer race of people never lived) exist in *good health* almost entirely on this vegetable. Much, however, is to be said on the manner of cooking them, and on the mode of their cultivation. Those that are *waxy*, are hard and difficult to digest, and frequently pass through the bowels unaltered, thus imposing on the digestive organs all their exertion, without affording the system any nutrition; whilst those that are *light* and *floury*, partake of most of the ingredients of wheat, and are found to agree much better with the human *stomach*; and it is a well-known fact, that cattle thrive

and fatten as much or more on this than on any other vegetable.

Turnips, though useful, are laxative, and afford but little nutrition. *Carrots* are hard and binding. *Peas** and *beans* are extremely indigestible, particularly those that are full grown, dry, hard, and old, such as are used for peas pudding, and should be avoided by delicate † *stomachs*. Green, un-

* It is not an unfrequent occurrence for death to ensue from spasmodic affection of the stomach, induced by eating green peas either not sufficiently cooked, or not broken down properly by mastication; three or four cases of which have come within the observation of the author. He, like many others, has often experienced in his own person the utmost inconvenience from eating them; and he feels surprised that Dr. Paris should recommend them as “a *wholesome and light food*,” in his *Treatise on Diet*, a work which, with the exception of a few anomalies, is the best of the day, and should be read by all persons interested in this subject.

† Whether in their green or dried state they afford but little nourishment, and are very indigestible and flatulent; hence they should be carefully refrained from by all, excepting the strong and laborious; to those of weak stomachs, they are particularly injurious.—Dr. Granville’s *Catechism of Health*, p. 182.

cooked vegetables, of almost all kinds, are indigestible, such as lettuce, radishes, &c.

Cabbage, when young and in season, and well boiled, considerably assists the concoction of animal food; and it is at all times better that our diet should consist of a combination of animal and vegetable substances.

Of animal food, *venison*, *game*, *mutton*, and *beef* are the most nutritious and digestible; whilst *veal*, *pork*, and *lamb* should be taken by those only whose power of digestion is strong, or who take much exercise in the open air.

Fish, of almost all kinds, yield a large proportion of nutritious matter, but not so much as *flesh*, as is sufficiently proved by the quick return of appetite after a fish meal, whilst, at the same time, they are for the most part *extremely indigestible**; and

* "Fish, independently of the heavy sauce with which it is eaten, is for the most part less easily digested than the flesh of land animals; and as it at the same time affords less nutriment, it is in both respects less proper for the food of dyspeptics."—Dr. W. Philip on Indigestion, 6th edition, p. 108.

it has been one of the errors into which medical men have been led, from not studying the properties of this kind of food, when they have so repeatedly recommended it to their recovering patients as a light and proper diet. Not so with *oysters*, they are both nutritious and easily to be digested. *Dry salted meats, pickles, new cheese, and pastry, are all indigestible, as well as nuts of all descriptions, and fruits of the plum kind. Currants, with raspberries, apples, and mulberries, are all easy of digestion; and so are gooseberries and grapes, if the skin is rejected, which should be done with all fruits. Milk is nutritious, but when boiled becomes indigestible and binding. The same may be said of eggs, if boiled too long. Poultry (with the exception of geese and ducks) are generally well suited to weak stomachs, although there are many persons, with whom mutton or beef agree much better.*

Persons whose *stomachs* are weak, or in whom the alimentary canal and other digestive organs are incompetent to the healthy

performance of their functions, should avoid, as much as possible, all kinds of indigestible food, such as *pork*, *heavy pastry*, *buttered toast**, *hot rolls*, *muffins*, *hard-boiled eggs*, *pears*, *chesnuts*, *wallnuts*, *plums*, *nuts*, *carrots*; *grocer's currants*, the *skins* of fruits, and new *cheese*† and new *bread*.

“ Cheese, that vile concocting elf,
That digests all things, but itself.”—*Hudibras*.

Foreign spices are highly stimulating and heating to the system, and certainly were not intended for the stomachs of the inhabitants of this climate; they only afford a temporary advantage, whilst they insensibly destroy the tone of the stomach. Dr. Paris observes, “ how happy is he who considers water his best drink, and salt his best sauce.”

* I do not object to the moderate use of good fresh butter on stale bread or biscuits.

† Cheese is often found to pass through the system in an unaltered state.

TEA.

It will be expected that I should also say something on the subject of *Tea* and *Coffee*, or of their effects on the digestive organs, and the constitution generally ; and, first, of *tea*. *Tea*, although a foreign plant, is imported into this country in such prodigious quantities, as to enable the chartered monopolizers to supply it for a beverage, which is generally taken twice a day by every individual within his Majesty's dominions. This favourite infusion now forms an almost necessary custom, and appears as if it were indispensable with our habits* ; and whatever may be its qualities, as relating to health, (after having been constantly used for 231 years,) it would be useless to attempt to persuade people from it, although some writers have

* At Queen Elizabeth's Court, the maids of honour breakfasted upon beef, and drank *ale* after it ; while now the sportsmen, and even the common labourer, generally breakfast upon *tea* !

devoted the best efforts of their brain to this purpose.

That it is a custom that could be well dispensed with, without any inconvenient results to health, no one I presume will deny. Much depends on the rank in life, situation, and habits of persons interested in this subject; those, for instance, who are accustomed to take their dinners at five, six, or seven o'clock, should avoid this superfluity afterwards, but more particularly *strong green tea*, which impairs the *powers of digestion*, producing many *nervous symptoms*, and often much *watchfulness* and *head-ach*, as well as the *loss of sleep*. To those who dine at the early hours of one, two, or three o'clock, and who take exercise after tea, if the latter be taken in moderate quantities, it is not so objectionable, except in some particular constitutions, where it is found by the patient, that owing to some derangement of the stomach, it ought to have been *abstained* from. I have known cases wherein the health of persons have been

much invigorated, as well as the state of their digestive organs improved by this change.

The Commercial History of Tea, as related by Thomas Short, M.D., in his Discourses on Tea, &c. in the year 1750, runs thus:—"The *Indians* have used the infusion of this leaf above 1200 years at least, as appears from the table of their ancient Pagan Saint, *Darma*, who flourished about the 519th year of Christ. He was the third son of *Kasinwo*, an Indian king, and a kind of pope, being the twenty-eighth successor of the holy see of *Siaka*, the founder of their paganism, who was a Negro, born 1023 years before *Christ*. This *Darma* was a most austere man, who, from an aim at perfect holiness, resolved to deny himself of all rest, sleep, and relaxation of body, and consecrate his mind day and night, without intermission, to God. After he had watched many years, being one day weary and over-fastened, he unluckily dropt asleep; waking next day full of sorrow for the breaking of his solemn vow, he cut off both his eye-brows, these

instruments of his crime, and with indignation threw them on the ground. Returning next day to the same place, behold, out of his eye-brows were grown two beautiful *tea-shrubs*. *Darma*, eating some of the leaves, was presently filled with holy joy and strength to pursue his divine meditations. He presently communicated to his disciples what great benefit he had found from *tea*, which they published to mankind. Thus, say the Japanese, were the virtues of *tea* discovered. The fable, however ridiculous it seems, shews—1st, The long use and great esteem of tea; 2d. Its serviceableness in some disorders of the eyes; 3dly. Its great efficacy against dulness, drowsiness, and weariness.”

It was first brought into Europe by the Dutch in 1600, and into England in 1602, in the reign of Elizabeth; but it did not become an article of very general use until James I. bestowed especial favour on the India Company.

COFFEE.

Coffee is highly stimulating, and if drunk too strong has the same pernicious effects on the *stomach*, *bowels*, and digestive organs in general as strong tea, and as respects its influence in destroying *sleep*, it is much more objectionable; therefore, it is better for those persons who cannot do without both, to take coffee for breakfast and tea in the evening, remembering that moderation in strength should be the leading consideration, in preparing either infusion.

WATER.

Before quitting these subjects, I would remark, that the practice of drinking water with *dinner* is a good one, and if *lukewarm*, is one of the best remedies for assisting the *stomach* in dissolving the food.

“ Nothing like *simple element* dilutes
The food, or gives the chyle so soon to flow.
But when the stomach, indolent and cold,
Toys with its duty—*animate with wine*
The insipid stream.”—Armstrong.

It is a well-known fact, that weak persons, after taking a glass of cold* beer with their dinner, frequently suffer from troublesome eructations, independent of being deprived of the pleasure of a good meal, in consequence of the natural cravings of the *stomach* being checked by the sudden contact with the cold liquor. And again I must observe, in order that the food should go through the regular process of concoction, in such a manner as to be beneficial to health, persons should never sit down to their meals immediately after any violent exercise, or when the body is heated beyond its usual state, or immediately after any strong passions of the mind ; for, in all such cases of unusual excitement, the stomach is *sympathetically*† affected, (as

* Dr. Grindall says—"cold drink is an enemy to concoction, and the parent of crudities."

† "Between all the different parts of the human frame there exists intimate relations, which correspond with each other, and carry on a reciprocal intercourse of action. The beautiful harmony produced by these concurrent phenomena is called *sympathy*. Thus, impressions not only produce effects on the part to which they are directly applied, but in

in sea sickness, when the motion of the brain induces vomiting).

Food should be taken at a moderate degree of heat; for the nearer we adapt it to the temperature of the blood, the sooner the process of digestion commences, as the solvent power of the juices of the *stomach* have no effect till its contents are at a proper standard of heat; therefore, if the food is too hot, all is at a stand till it becomes cooler; and if too cold, till it arrives at the natural heat. By taking food or drink too hot, there is a danger of inducing a determination of blood to the *stomach*, and probably inflammation may

consequence of the freedom of communication between the nervous system, parts of the body situated at a distance from those in which the original mischief exists become affected by it: *the real nature of sympathy is yet unknown*, but we are acquainted with many of its effects. Numerous examples of sympathetic actions may be adduced; the communication which exists between the uterus and breasts is a striking instance of it."—Sir Astley Cooper's Lectures, p. 8.

follow* ; and if they be taken too cold, they may interrupt the circulation of the blood in the vessels of the *stomach*, and thereby weaken its tone and power to perform its functions.

The *quantity* of food taken should also be regulated, as well as the quality; if the *stomach* is *overloaded*, it imposes on the absorbing vessels more than they are able to perform, and if the peristaltic motion of the bowels is not sufficiently strong, the food must remain a long time in the body, producing *headach*, *fever*, and all kinds of maladies, and frequently terminating in death from *apoplexy*. If, on the other hand, the bowels should possess sufficient strength to do double duty, then all that is superfluous becomes excrement, instead of aliment ; besides which, by overloading the *stomach*, you distend its coats to such a degree that it

* The author witnessed the death of one of his patients, an elegant and highly accomplished young countess, who sacrificed her life by imprudently drinking a cup of very hot tea.

loses its *mechanical* power of urging the food forward into the *intestines*, and in the course of time its muscular fibres are so much impaired *, as to be scarcely able to perform its offices,—hence one of the worst cases of indigestion.

A suitable *proportion* of *drink* with our food is also necessary for the purposes of digestion, as must on reflection appear to every thinking person; for it does not require much knowledge to show, that the solid food we take is fitter for the duties of the *stomach*, when it is softened down by fluids, than when in its solid state. As the natural secretions of the *stomach* only flow gradually, it must be some time before a sufficient quantity of moisture can be supplied, for a large mass of *beef, bread, potatoes, pudding, cheese, &c.*; and, there-

* “The objects to be kept in view, in regulating the diet in indigestion, as appears from what has been said, are, that it shall tend as little as possible to produce either *morbid distention*, or morbid irritation of the surface of the stomach.”
—Dr. W. Philip on Indigestion, p. 104.

fore, it is that such meals, taken without a moderate quantity of fluid, are long in being digested, and tend to weaken the energies of the *stomach*, by imposing upon it too great a task.

I recommend that persons drink *moderately* with their meals, although some physicians urge the necessity of abstaining from fluid during a meal, forgetting that nature requires to be satisfied, as much for the alleviation of thirst, as for the cravings of hunger; they might as well endeavour to persuade me that it is improper to eat when you take drink, as to tell me you should not drink when you take food. *I require no better physician than nature.*

With regard to *foreign wines*, I shall merely state, that if they are *good* in quality, and taken *moderately* in quantity, they are perhaps the best of all stimulants; whilst *home-made wines* are considered as injurious to weak *stomachs*, producing sour eructations, and impairing the powers of digestion.

Beer, if good, is the most wholesome be-

verage we can take ; I must, however, here observe, that I have seen the ill consequences (and have experienced them also) of taking a large* draught of beer, or other fluid, immediately before, or at the commencement of a meal. This practice should be avoided, as it generally destroys the appetite for some time, and weakens the secretions of the stomach, instead of softening the more solid substances taken as food, and rendering them more suitable for digestion.

Dr. Paris says, "It has been computed, that from the dissipation of the nutritive juices by boiling, one pound of *roasted* contains as much nourishment as two of *boiled* meat." To those, therefore, who can take but little, this is worthy of observation.

Food should be well dressed, or else you impose on the *stomach* the duties of the *cook*, as digestion never commences till the

* "It is holden better to drink oft and *small* draughts at meat, than seldome and great draughts, for so meat and drink will better mingle."—Dr. Bailey *on the Preservation of the Eye-sight*, 16mo., 1673, p. 13.

food be well softened*. At the same time I will allow that raw meat contains more nourishment than cooked, though it is less digestible. This has been proved by the experiments of Spallanzani.

Soups, broths, and jellies, will form the last, though not the least in importance, to be spoken of. It is a current belief, and a sort of popular obstinacy prevails on the subject, that the nutritious as well as digestible properties of animal food reside more abundantly in the jelly-like matter of soups†, that are obtained from them by boiling, than in the meat itself. Without entering into a chemical explanation of the changes which animal substances undergo by this process,

* "It appears from my experiments, that boiled, and roasted, and even *putrid* meat, is easier of digestion than *raw*."—See J. Hunter *on the Animal Economy*, p. 220.

† "A dog was fed on *the richest broth*, yet could not be kept alive; while another, which had only the *meat boiled to a chip*, (and water,) thrived very well. This shews the folly of attempting to nourish men by concentrated soups, jellies, &c."—Sinclair's *Code of Health*.

I shall merely refer to a fact opposed to this doctrine, and which I think must entirely set the matter at rest, in the views of those who honour me with a perusal of my little work.

Some few years since, soon after the Penitentiary was built at Millbank, and had become inhabited, it was found that a great number of the inmates became sick, and that almost a daily death followed, and no one, not even medical men, could account for the cause; but it was generally believed that the lowness of the situation, or the dampness of the building, contributed to these disasters. Much discontent prevailed; many were the inquiries made; and the subject of removing the building, which had cost an immense sum, was seriously spoken of. A committee was appointed by the House of Commons to investigate the matter; the building was surveyed in all its bearings; the drainings and ventilations viewed; the domestic arrangements and food scrutinised; and the clothing and bedding examined.

The medical department received the advantage of a sub-committee of physicians, to inquire into the nature of the diseases, and cause of death, &c. Nothing, however, transpired to throw sufficient light on the subject to enable them to arrive at a satisfactory conclusion, and they met again and again, until the happy suggestion was at last made, of trying what could be done by a change in the nature of the food, particularly as regarded the mode of cooking it. Now I should first observe, that the prisoners had been allowed, both with a view to economy, as well as a regard to their personal comforts, a large proportion of soup for their daily support, prepared, I believe, from the ox cheek (certainly the best part of the animal for that purpose). They had soup for breakfast, soup for dinner, and, I believe, soup for supper,—good in quantity and quality; and this, with a *small* portion of meat, and a *small* portion of bread, with a few vegetables, formed their usual support.

I say, the happy suggestion was made, of trying what could be done by allowing the meat to be the *larger*, and the soup to form the *smaller* portion of their daily food, on the belief that the *fibre* of the meat was best, as naturally suited to the human *stomach* *, I mean, of course, when properly combined with the larger proportion of seasonable vegetables; the result proved successful. The patients recovered; the place became healthy; and the new system found necessary, has ever since been, to the honour of our government, persevered in. I have given mere matter-of-fact statements, to show what kind of aliment is best adapted to the healthy condition of the digestive organs, without going into a labyrinth of unnecessary and lengthened explanation:

* "I am persuaded that the stomach digests solid aliment more easily than liquid and bulky food; and that soups and broths are more quickly disposed to run into active fermentation, and require the exertion of more vitality to restrain such morbid and spontaneous changes, than animal food in a solid form."—p. 196. *Treatise on the Structure and Diseases of the Liver*, by William Saunders, M.D., F.R.S. and S.A.

suffice it to say, that the choice I have selected may generally be depended on as the best, in most of those conditions and varieties of circumstance to which man is subject.

COOKING.

The functions of the digestive organs will be more or less influenced by the various effects produced on food by *cooking*, which subjects it to considerable chemical, as well as mechanical changes, such as hanging till putrid, drying in the sun, beating, grinding, stuffing, seasoning, pickling, &c.; but the most important changes appear to be effected by the agency of heat, or, as the chemists term it, caloric, such as stewing, frying, broiling, baking, mincing, hashing, boiling, and roasting, and sometimes, even after these, being mixed in curry, or covered with the hottest pepper, till it acquires the appellation of the *Devil* himself!

Roasted Meat contains nearly double the nourishment of boiled, but at the same time is not equally digestible.

Boiled Meat is, therefore, best suited to delicate or weak *stomachs*.

Frying is the most unwholesome mode of cooking, and is nothing more than boiling in fat or oil.

Broiling is one of the very best modes of cooking, whereby the meat becomes tender, while it retains its best and most nutritious juices, and to the sportsman, and those engaged in active pursuits, it will be found extremely nourishing.

Baking is a mode of cooking much resorted to by the poor, to whom it is convenient, inasmuch as they can continue their employments during the process, besides being also cheaper than the buying of fuel; but to very delicate stomachs it is frequently objectionable, on account of a strong flavour it is liable to imbibe in consequence of various *steams* arising from heterogeneous dishes.

CONDIMENTS

Consist of *peppers, mustard, vinegar,*

cloves, ginger, nutmegs, curry, &c. These are all useful, and if properly, and moderately indulged in, assist digestion, but if taken to excess they are, in consequence of their stimulating properties, weakening to the *stomach*.

SALT.

Salt appears to be a natural requisite both to the animal and vegetable world. A few years since I had a piece of ground dug up in my garden, for the purpose of sowing seed for a crop of carrots, when it was proposed to me by a neighbour to give it a light covering or sprinkling of salt, assuring me of the advantage; I therefore divided my plot of ground into two, by a cord run across, the one half only I salted, and this half produced me very nearly double the crop of the other.

Salt is well known to be the *best anti-putrescent*, on which account parents should insist on its moderate use with children, who are frequently destroyed by worms from this neglect. To the *stomach* it is a natural

stimulant, *and digestion never goes on well without it.*

Many instances have occurred wherein patients have been reduced to the worst degree of disease from indigestion, in consequence of their abstaining from the use of salt, to which they had a dislike; these have been frequently *cured* by the recommendation of their physician to take it, by whom they have been convinced of its necessity.

OBSERVATIONS.

Having gone briefly through the several topics connected with the use of *Lave-ments*, and congratulated my readers on the fortunate discovery of the improved apparatus for the purpose, contrasting the new with the old means, and endeavouring to prove this practice as most essential to the cure of diseases, I have gone on to give the descriptive outlines of the digestive organs, together with sketches or drawings of the same. I have also shown which of those organs are most subject to

disease, depending on indigestion, and have proved why they are so, in what manner this is effected, and how the constitution suffers in consequence. Here I have taken a view of the changes that the aliment undergoes in the progress of digestion, how it sustains life by imparting its nutritious qualities to the blood, whilst its impure dregs are separated from it, and expelled as useless. Having described a set of vessels called *absorbents*, I have shown that by their action life can be sustained for a long period, by injecting the *intestines* with nutritious matter*; in cases where diseases of the *mouth, throat, or sto-*

* Some few years since I was requested to visit a gentleman at Chelsea, who was labouring under mental aberration, with an impression on his mind that it was his duty to *starve*, for, as he repeatedly exclaimed, “ God says I must not eat;” and by no means could he be prevailed on to taste the smallest particle either of food, or drink, and he constantly kept his teeth closed. This unhappy gentleman was supported for several weeks by *enemas* of soup, arrow-root, &c., which he submitted to under the impression that it was a purgative; but he at length died from emaciation.

mach, have prevented the swallowing of food; and that medicines injected in the same way, exert also their beneficial effects on the system, as though they had been taken by the mouth. Next to this I have shown that the influence of purgative medicines is not at all times sufficient to answer the intentions of the practitioner, have spoken of some of those diseases in which this class of medicines is injurious, and shown the advantages to be derived from substituting the use of *Lavements*.

I have also accounted for, and named a variety of the causes, inducing derangement of the digestive organs, and shown their actual as well as sympathetic influence over those disorders. After this, I have endeavoured to prove, that some of the difficulties that impede digestion, and the passing of the *alvine excretions*, arise from the position* of

* If the intestine was a straight gut, instead of being formed by a variety of circumvolutions and irregularities, the *food* would pass too rapidly through it, and not afford sufficient time for the absorbents to suck up the nutrition from it.

the *colon*, together with the bags or pouches therein contained, forming receptacles for excrementitious matter ; and I have endeavoured to show how these difficulties may be overcome by means of *habitual injections of warm water*. Next to this a proper attention to dietetics, as most conducive to the healthy state of the digestive apparatus, regulated according to our habits of life, age, exercise, &c. has been adverted to.

The attention which females, in particular, should pay to the progress of digestion, as connected with so many *delicate circumstances*, on which the comfort of their whole lives greatly depends, has been stated ; with hints to mothers, school-mistresses, and nurses, on this most momentous duty ; and I have recorded the death of a female in child-birth, actually proved to be in conse-

It may be observed as analogous, that all rivers are equally irregular, the meanderings of which prevent the too sudden current of water, or navigation would be impeded either by the rapidity, or shallowness of the stream. " O Lord, how manifold are thy works ! in wisdom hast thou made them all."

quence of accumulations of *fæces* in the large *intestines*, which brought on mortification in the parts; and I have shown how this is to be prevented, ascertained, or cured.

A second case I proceeded to record, of a person having taken daily *only a little magnesia*, which, accumulating to a large lump or ball, impeded digestion, irritated the *stomach*, and ended also in death; here I advised my readers not to trust too much to their own judgment.

I have, in a brief manner, gone on to explain the different effects of purgative medicines on the constitution, in proportion to the quantity administered, and proved that the want of this knowledge, is dangerous to domestic practitioners. I again gave a decided case of the benefit derived from warm water injections, in allusion to a young lady, a patient of mine, in Monmouthshire, whereby a large accumulation was broken down, and carried away by

this simple means; and I have shown that it is dangerous for young females to be *too* delicate in their feelings, stating the necessity of their obtaining *daily relief from the bowels*. Having stated thus much, I proceeded to point out the inconvenience to which the *stomach, liver, kidneys, &c.* are subjected, by the pressure of the distended *intestines* against them, interrupting their natural functions. I referred to the leading symptoms by which we are to discover the unhealthy state of our digestive functions, alluding to the colour of the motions, and the various unhealthy appearances to which the countenance is subject, as well as very many painful effects produced, some of which I have enumerated. I have also lightly and superficially touched on the quantity of alvine evacuations usually passed by the healthy subject: not that this can be a certain criterion as to what ought to pass, nor that we can accurately determine by it as to the process of digestion being complete or incom-

plete, as the larger portion passes off by the pores* of the skin. I have not omitted either to remind persons of the danger in which they place their lives, by trusting to their own judgment in cases requiring medical treatment, of which, generally speaking, they must be more ignorant than of any thing beside; and I trust this hint will put them on their guard. Only let them remember the case of the old woman and her pennyworth of magnesia.

I have sufficiently urged the use of warm-water *Lavements*; and in doing so, I have shown the many advantages arising from this practice, when, on the contrary, I could find none against it.

In speaking of the diet (on which subject I only lightly touched) best suited to the state of the patient under various circumstances, habits, age, &c., I did not refer to the general observations, which will be found

* According to the calculation of Leuwenhoek, *one grain of sand* will cover 125,000 of the perspiring pores of the skin!!

in a subsequent chapter, and in which I have divided the alimentary substances, so as to convey the soundest principles derived from experience, and to render them well understood. The cases given in illustration, will serve to remove those prejudices which have so long prevailed in favour of some kinds of food, and against other kinds, and which are calculated to mislead us into (perhaps) fatal error.

CHAPTER VII.

OF THE USE OF LAVEMENTS IN VARIOUS
DISEASES.

IT will now be my object to point out some of the diseases for the relief and cure of which I recommend the use of the apparatus for *Lavements*; and first, those that require the injection of *warm water* only, and which are likely to be alleviated by this simple means, without the use of medicines; whilst at the same time, an aggravated case of any of these diseases may require *medicated injections*, or other general treatment under the advice of a professional man.

Acidity of the stomach.

Acute rheumatism.

After pains.

Asthma.

After intoxication.

After menstruation.

Bilious complaints.

Bilious colic.

Cholera morbus.

Cessation of the menses.

Chronic rheumatism.

Clap.

Constipation.

Consumption.

Convulsions.

of infants.

of pregnant women.

after childbirth.

Corpulency.

Costiveness.

during pregnancy.

Cramp in the stomach.

Delirium.

Dysentery.

during tedious or protracted
labour.

Delirium after childbirth.

Dentition.

Difficulty of breathing.

in passing water.

Dry gripes.

Epilepsy.

Fever; with a view to remove putrescent matter.

Fistula and piles.

Flatulence.

Fatigue of body or mind.

Flatulent colic.

Gall stones.

Gripes of infants during dentition.

Getting wet in the feet.

Gleet.

Gout.

Gravel.

Green sickness.

Headach.

Habitual costiveness, without other apparent disease.

Heartburn.

Hectic fever.

Hysterics.

Iliac passion.

Inflammation of any of the organs of the chest or abdomen.

Irritation of the rectum.

Itching about the anus.

Indigestion.

Inflammation of the brain.

Inflammatory sore throat.

Influenza.

Insanity.

Introsusception of the bowels.

Irregular menstruation.

Jaundice.

Lumbago.

Malignant fever.

sore throat.

Milk fever.

Miscarriage.

Nervous diseases.

Obstruction of the bowels.

of the menses.

Pain in the stomach.

head.

during pregnancy.

Palpitation of the heart.

Painful menstruation.

Piles.

during pregnancy.

Pregnancy.

Putrid fever.

sore throat.

Rheumatic gout.

Rheumatism

Rupture.

Retention of urine.

Sciatica.

Stoppage of the discharge after delivery.

Stone in the bladder or kidneys, producing inflammation*.

Strangury.

Stone in the ureter.

Spasmodic affections.

Scalding of the urine.

Stricture in the rectum.

urethra.

œsophagus.

Suppression of the menses.

Swelled testicle.

Typhus fever.

* "A glyster of warm water, by serving as a fomentation to the parts, may be of considerable service in inflammation of the bladder, and the lower intestines."—Dr. Buchan's Domestic Medicine.

To those of sedentary habits, who are generally costive.

Ulcerated sore throat.

Worms.

The administration of cold water is, I think, a dangerous practice, as the parts are totally unaccustomed to the sudden change of temperature it causes, although I admit the utility of it on certain occasions, as in some cases of hæmorrhoidal and other complaints; but as this practice should be under the entire management of a medical man, I shall not here introduce or recommend it.

I shall now proceed to instruct my readers more particularly in the application of the newly-invented *Lavement* apparatus, giving first some general hints that will be found useful.

I have already stated that vast *accumulations of fæces* will, in some cases, collect in the *cæcum* and *colon*; and as they become too hard to be affected by purgative medicines, and are too much out of our reach to use any mechanical means of

removing them, (as we sometimes have done when they are in the *rectum* * instead of the *colon*), we have no choice left us but that which happens to be the best—namely, to throw up a sufficient quantity of warm fluid to counteract the spasm of the bowel, render the collections soft, extend the place of their confinement, break down their structure, stimulate the inactive intestine, renew its peristaltic power, and open a free canal for their discharge—and this is to be done, not with a small quantity, as a pint or a pint and a half,—if so, the old pipe and bladder would answer the purpose;—but, in these dangerous cases, it must be injected in quantities

* It was formerly the custom, in cases of retention of *hardened fæces* in the *rectum*, to use an instrument something like the handle of a table-spoon, which was applied as a sort of scoop or ladle; and a remarkable instance occurred some years since to a tradesman in the Haymarket, whose bowels had been confined several weeks, when on the application of such an instrument, it was found that the retained fæces had become so perfectly deprived of moisture as to be brought away in appearance more resembling *dry snuff* than any thing besides!!

amounting to, from one to two quarts, (which can be best effected by the *clysmo-duct*,) it having a long way to travel, and a large space to fill, and great difficulties to overcome. I have here alluded to extreme cases. As these decrease in importance and magnitude, so will the remedies employed for their relief decrease in like proportion; and as there is no difficulty in managing every-day cases by gently relaxing the bowels, so all intermediate ones will derive their benefit from the knowledge we possess with regard to the worst as well as the best cases.

It is customary in France to use a *Lavement* after dinner; and a lady in that country would be considered as indelicate were it known that she had omitted this practice, as an English lady would be thought dirty were she to come down to breakfast without cleaning her teeth or her nails. But as far as it relates to *health*, which is all that *I have to do with*, I recommend its use the first thing after breakfast, which is certainly the period when nature appears to require

this salutary relief; which I consider to arise partly in consequence of the rest afforded to the *stomach* during the night, that when the fresh stimulus of breakfast is applied to it, it imparts its renewed action to the smaller intestines, and they again to the larger, till the required purpose is fulfilled.

With regard to females in a pregnant* state, I should generally advise that in using a *Lavement* they place themselves in a recumbent position, which is a preferable one, on account of the pressure of the *womb* on the lower part of the descending *colon* or *sigmoid flexure*; and also to empty the bladder before they administer the *Lavement*.

The sensations felt by the patient at the time of injection †, are generally the same

* Under these circumstances, no system of relief is so certainly effectual, or so *safe*, as the occasional use of a *Lavement*; and there are no cases wherein the use of purgative medicines are so mischievous.

† Nothing can be more simple or easy than the application of a *Lavement*; it is entirely *unattended* with pain or inconvenience of any kind, and a single trial of it has in every in-

as those we feel when first the action of purging medicine begins, and is conclusive evidence that relief will follow.

Where persons are in the daily practice of using *Lavements*, merely to assist a somewhat *sluggish digestion*, I should also recommend them to take two or three grains of *blue-pill*, once or twice a week, at bedtime; and, in order to increase their purgative action, to add to it occasionally about three grains of the *compound extract of colocynth*. Those who suffer from *dyspeptic* complaints, will find that in most cases they may rely on this practice, without the aid of useless or nauseous medicines; at the same time I wish my readers to understand that there are varieties of symptoms depending on different constitutional causes, where perhaps the simple practice I have here described would require certain modifications which could only be effected under

stance within the author's observation, led persons to be *anxious* for a repetition, as frequently as their case required it.

the superintendence of a professional man, to particularize these would be impossible in a work so limited as this ; but it is a happiness to know that medical science keeps pace with the many other rapid improvements of this intellectual age, and the author feels pleasure in bearing testimony to several recent important discoveries and improvements in the healing art for the cure of these complaints, and in observing that there are *now* but few exceptions to the general remark, “ That, if properly treated, there is a remedy for every disease ;” but in stating this, he would more particularly allude to diseases occasioned by *indigestion and costiveness*, the proper treatment of which must depend on a long and extensive experience, derived from a complete anatomical knowledge of the *parts* more immediately engaged in the *functions* of the important processes of digestion.

CHAPTER VIII.

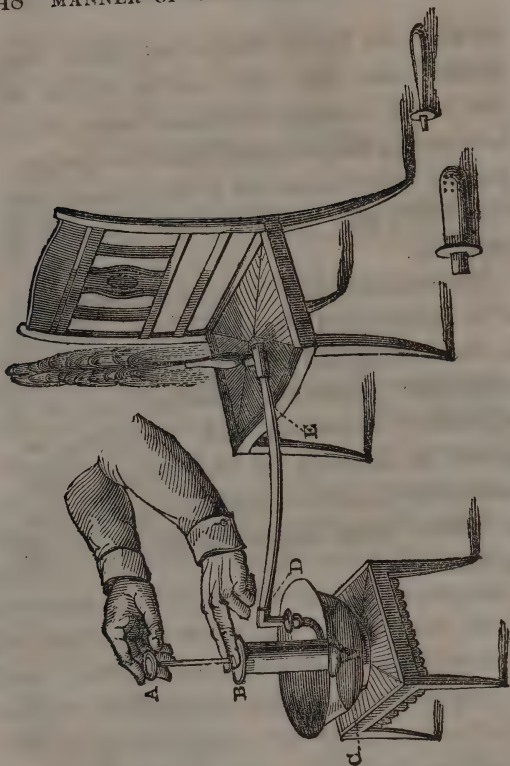
DESCRIPTION OF THE APPARATUSES FOR LAVEMENTS
RECOMMENDED BY THE AUTHOR, WITH RECIPES
FOR INJECTIONS, ETC..

THE injecting *syringes* made by many of the manufacturers are much too small, as they only hold half an ounce, or one-third part of a common wine glass, which I have observed in many of my patients, *to tease and tire them, from the time it takes to throw up a sufficient quantity.* A better syringe, which I invented, will hold about two ounces, which is seldom found too much for each descent of the piston. At the lower part of the side of the syringe is attached a flexible tube, about a foot in length, with an ivory pipe at the other end to be introduced into the *anus*, and which may be retained there by the patient sitting down upon it, on a chair; then placing a *stool*

between the legs of the patient, about four inches lower than the chair on which he sits, put on it a large wash-hand basin, which is to contain the proposed liquid for injection; put the lower open end of the syringe into this fluid, and commence the process of pumping.

The annexed plate is a good representation of a *syringe*, and of the manner of using it, but the *Clysmo-duct*, next described, is altogether preferable, inasmuch as it is a *self-acting* apparatus, and, therefore, requires no exertion of the patient, independent of which its action is so *gentle* that *no pain* or other inconvenience can attend its use.

148 MANNER OF USING THE SYRINGE.



A The Piston.
 B Top of Syringe.
 C Bottom of do.

D Side Opening of Syringe.
 E Flexible Tube.

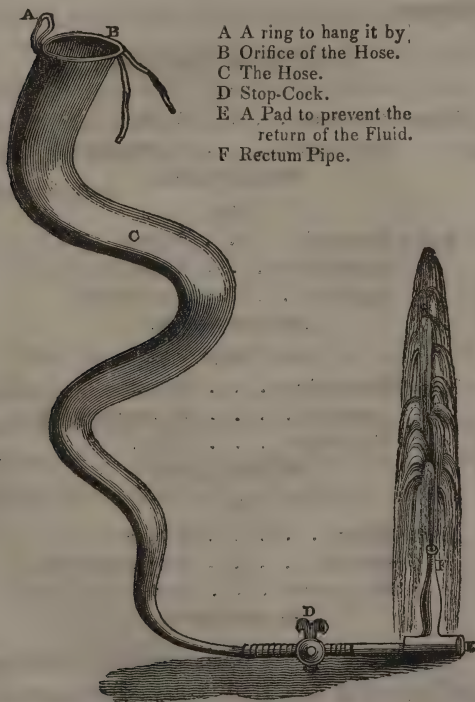
This other more simple apparatus, which I recommend, and which I have improved from one lately introduced in practice at Paris, I have called the flexible *Clysmaduct*. It is more simple and safe in its operation than any apparatus hitherto employed*, and is admirably adapted for females, both because it is self-acting, and also that it is used without the slightest appearance of indelicacy (which is not the case with syringes); it is, therefore, not only peculiarly well adapted for the administration of injections in diseases of the *bowels*, but also in affections of the *womb*. It consists of a long, tapering, India rubber water-proof funnel or hose, of about four feet in length, four inches in diameter at its upper extremity, and about half an inch only at the lower end, where it is attached to a *tube* supplied with a cock, the extremity of which tube is adapted for *introduction*, as in the instrument already

* See the opinions of the leading Members of the Profession at the end of the work.

described. When an injection is to be administered, the fluid is to be poured into the long funnel-shaped part of the apparatus, having previously taken care that the stop-cock is turned, so as to prevent its running out at the opposite extremity. When thus filled to within four inches of the top*, the hose is to be hung on a hook or nail placed in a convenient part of the wall of the room, at such a height that the lower end of the tube shall reach to within one inch of the floor. The tube may be now *introduced*, and the patient may sit, or lie down, when the stop-cock being turned, the fluid passes into the bowels *by its own gravitation*. By this apparatus, an injection, whether in affections of the *stomach* or *bowels*, or in diseases of the *womb*, may be thus used, either in a sitting, lying, or standing posture, without the

* The *filling* of this apparatus, as I have described above, more particularly applies to the administration of simple *Lavements*; as, in medicated injections, no more would be put into it than the quantity actually prescribed; but as so much is to be effected by simple injections of warm water alone, the latter practice will only be occasionally required.

least difficulty to the patient, or *exposure of the person*, whether it be used by the patient herself, or administered by another individual.



I shall now give my readers a number of recipes for *medicated injections*, which may be administered by either of the apparatuses, and with the utmost benefit in a number of diseases.

A. LAXATIVE INJECTIONS.

I.

Take of Thin gruel 1 pint;
 Common salt 1 table-spoonful.
 Mix them together.

II.

Take of Thin gruel . . . 1 pint;
 Glauber's salts . . . 1 ounce;
 Hogs' lard $\frac{1}{2}$ an ounce.
 Mix them together.

III.

Take of Epsom salts . . . 1 $\frac{1}{2}$ ounce;
 Linseed oil 2 table-spoonsful;
 Warm water 1 pint.
 Mix them together.

IV.

Take of Manna 1 ounce;
 Olive oil 2 table-spoonsful;
 Barley-water 1 pint.
 Mix them together.

In employing the prescriptions containing *lard* or *oil* of any kind, I should recommend

the use of the old-fashioned pipe and bladder, instead of either of the apparatuses mentioned in this book, as such greasy substances are likely to adhere about the instruments, and render them unpleasant to handle.

These four simple injections are old family remedies, are easily prepared, gentle in their operation, and well adapted for the removal of occasional costiveness. No. III. is the most active.

V.

Take of Confection of senna . . . 1 ounce;

Warm caraway water . . . 1 pint.

Mix them together.

The caraway water may be made by boiling 1 ounce of caraway seeds in a pint and a half of water, till reduced by boiling down to 1 pint; it prevents the griping effects of the confection of senna.

VI.

Take of Castor oil . . .	$1\frac{1}{2}$ ounce;	} mix them.
Treacle . . .	2 ounces;	
Epsom salts . . .	1 ounce;	
Warm water . . .	$\frac{3}{4}$ of a pint.	

Mix them together.

The last two, Nos. V. and VI., will be found to be rather more active than the four former, and may be used in similar cases.

VII.

Take of Syrup of buckthorn . . 2 ounces;
 Glauber's salts . . . 1 ounce;
 Thin gruel . . . $\frac{3}{4}$ of a pint;
 Antimonial wine . . $\frac{1}{2}$ an ounce.

Mix them.

VIII.

Take of Senna leaves . . 1 ounce;	} To stand in a lightly covered vessel for one hour, then strain, and add
Scraped ginger . 1 drachm;	
Boiling water . . 1 pint;	
Soft soap . . . $\frac{1}{2}$ an ounce;	
Epsom salts . . 1 ounce;	
Antimonial wine $\frac{1}{2}$ an ounce.	

Mix together.

In cases where milder injections are ineffectual, Nos. VII. and VIII. will be found useful agents, particularly in assisting the operation of purgative medicines; and in obstinate cases of *costiveness*, it will be well, on the previous night, or some few hours before their administration, to take a couple of pills, containing together calomel two

grains, cathartic extract five grains, ipecacuanha one grain.

B. PURGATIVE INJECTIONS.

IX.

Take of Spirits of turpentine	1 ounce;	} mix.
Honey	1 ounce;	
One yolk of egg	—	
Gruel	1 pint.	

Mix together.

X.

Take of Tincture of jalap	1 ounce;	} 1 pint.
Castor oil	1 ounce;	
Tartar emetic	3 grains;	
Infusion of senna, prepared as directed in No. VIII.		

Mix together.

XI.

Take of Extract of colocynth,
 Powdered socotrine aloes, of each 2 drachms;
 Water 1 pint; simmered together over a slow
 fire, and constantly stirred till the ingredients
 are dissolved; add
 Salts of tartar, a small tea-spoonful;
 Tincture of jalap, $\frac{1}{2}$ an ounce.

Mix together.

XII.

Take of Croton oil	6 drops ;
Syrup of buckthorn . .	1 ounce ;
Antimonial wine . .	2 ounces ;
Epsom salts	1 ounce ;
Gruel	$\frac{1}{4}$ of a pint.

Mix together.

The last four of the *purgative* injections are adapted for diseases that resist all milder remedies ; but I advise patients in all cases of difficulty, and where the milder treatment is not successful, to lose no time in applying for medical relief from some skilful practitioner.

OBSERVATIONS.

Laxative and purgative medicines injected into the *intestines*, must remain there a sufficient time, to allow their ingredients to act upon the internal surface of the alimentary canal, and to be taken up by the *absorbents* (alluded to in the former pages of this work), otherwise they would be merely mechanical,

and possess no advantage over water only; therefore, in many cases, where a difficulty exists in retaining them, it will be proper to reduce the quantity of simple fluid added to them, as water-gruel, &c., in some cases to half the quantity, or even one-third, remembering that a small bulk does not stimulate the action of the bowels so much as a larger one.

C. PURGATIVES COMBINED WITH
ANTI-SPASMODICS.

XIII.

Take of Glauber's salts . . . 1 ounce;
Tincture of assafoetida . 2 drachms;
Thin gruel 1 pint.
Mix them together.

XIV.

Take of Scraped camphor . . 10 grains,
Castor oil 1 ounce;
Tincture of assafoetida . 2 drachms;
Thin gruel 1 pint.
Mix them.

XV.

Take of Tincture of castor . . . 2 drachms;
 Linseed oil 1 ounce;
 Epsom salts 1 ounce;
 Thin gruel 1 pint.

Mix them.

XVI.

Take of Tincture of assafoetida . . . $\frac{1}{2}$ an ounce;
 — of opium 20 drops;
 Syrup of buckthorn 1 ounce;
 Warm water 1 pint.

Mix them.

Patients affected with spasm will find it to their advantage to use either of the above four prescriptions; and to females subject to *hysteria* they will be equally beneficial: in *puerperal convulsions*, No. XVI. may be well recommended.

D. ASTRINGENTS.

XVII.

Take of Tincture of kino . . . $\frac{1}{2}$ an ounce;
 Water (cold) $\frac{1}{2}$ a pint.

Mix them.

XVIII.

Take of Bruised oak bark . . . 2 ounces ;
 Alum bruised . . . 2 drachms ;
 Water (boiling) . . . 1 pint.

Mix them, and let them stand in a covered vessel till cold,
 then strain.

XIX.

Take of Tincture of catechu . . $\frac{1}{2}$ an ounce ;
 Water (cold) . . . $\frac{1}{2}$ a pint.
 Mix them.

XX.

Take of Galls bruised . . . $\frac{1}{2}$ an ounce ;
 Water from the black-
 smith's forge : : $\frac{3}{4}$ of a pint.
 Boil down to $\frac{1}{2}$ pint. Strain.

Few of the cases that require the aid of
 astringent applications should be interfered
 with, unless under the direction of a medical
 man ; but the use of astringent injections
 must be frequent.

E. ANTHELMINTICS.

XXI.

Take of Lime water . . . $\frac{1}{2}$ a pint.

XXII.

Take of Tincture of assafoetida	$\frac{1}{2}$ an ounce ;	} mix.
Spirits of turpentine . .	$\frac{1}{2}$ an ounce ;	
Yolk of one egg	—	
Add warm water	$\frac{1}{2}$ a pint.	

Mix them together.

XXIII.

Take of Cape aloes, in powder . 1 drachm ;
 Assafoetida, bruised . . 1 scruple ;
 Thin gruel (warm) . . $\frac{1}{2}$ a pint.
 Stir them till the ingredients are dissolved.

XXIV.

Take of Tobacco 6 grains ;
 Boiling water . . $\frac{1}{4}$ of a pint.
 Let it stand in a covered vessel one hour, then strain.

XXV.

Take of Cowhage, scraped from the shell 1 scruple ;
 Honey 1 ounce ;
 Gruel 3 ounces.
 Mix them together.

These injections may be used with advantage in cases of *tape-worm*, or the tormenting little *ascarides* ; and any of the above may

be safely administered to children of the most tender age, only regulating the quantity accordingly, and daily repeating it; but in cases of worms in the *stomach* or small intestines, this practice will avail but little, and I would then recommend purges of the *drastic* kind, or, perhaps, some preparation of mercury, during two or three successive days, and afterwards any of the above injections may be used. By these means the worms will be removed from the upper parts of the digestive canal, and driven into the lower or large bowels, where the injections will reach them, and cause them to be expelled.

F. ANODYNES.

XXVI.

Take of Tincture of opium 1 drachm;
 Warm milk $\frac{1}{2}$ a pint.

XXVII.

Take of Oil of aniseed 6 drops;
 Laudanum 12 drops;
 Prepared chalk 1 drachm;
 Thin gruel (warm) 4 ounces.

M

XXXI.

Take of Tobacco, from 20 to 30 grains;
 Boiling water $\frac{3}{4}$ of a pint.
 To stand in a covered vessel for a quarter of an hour, and
 then be strained.

Very numerous, indeed, are the cases wherein benefit may be derived from the use of *anodynes*, particularly when administered *per anum*: some of them will be found in the list of diseases in the index. The class of anodyne injections, combined with tobacco, are only applicable in those cases which come immediately under the care of a talented practitioner, as, for instance, in *strangulated hernia*, as considerable danger attends the administration of this herb. In flatulent and colicky pains of the bowels, when there is no actual inflammation, it is sometimes useful to combine anodyne with purgative remedies, and this practice has received the sanction of many eminent physicians.

G. TONICS.

XXXII.

Take of Peruvian bark in powder 1 ounce;
 Tinct. of opium (called laudanum) . $\frac{1}{2}$ a drachm;
 Thin tepid gruel $\frac{1}{2}$ a pint.
 Mix together.

XXXIII.

Take of Extract of bark 2 drachms;
 Confection of opium 2 grains;
 Tepid water 6 ounces;
 Mix them.

XXXIV.

Take of Sulphate of quinine 1 scruple;
 Laudanum $\frac{1}{2}$ a drachm;
 Tepid distilled water $\frac{1}{4}$ of a pint.
 Mix them.

Persons whose stomachs are weak, and unable to retain tonic medicines, will find the advantage of employing injections like these; and in the case of infants and children, with whom much difficulty at all times exists in administering tonics by the mouth, these injections will be advisable, regulating

the quantity and strength of them according to the age of the child, and *omitting the laudanum in cases of young children.*

H. STIMULANTS.

XXXV.

Take of warm brandy and water, a quantity equal to two glasses, as usually made to drink.

XXXVI.

Take of Grains of paradise . . .	1 drachm;	} bruised.
Cubebs	$\frac{1}{2}$ an ounce;	
Mustard seeds	$\frac{1}{2}$ an ounce;	
Boiling water	$\frac{3}{4}$ of a pint.	

Let it stand till nearly cold, then strain.

In some cases of suspended animation, as from drowning, cold, &c., XXXV. will be found useful, and XXXVI. in suppression of the *menses*.

I. DEMULCENTS.

XXXVII.

Take of fat mutton broth 1 to 2 pints.

XXXVIII.

Take of Mutton suet 2 ounces;

Milk 1 pint.

Boil together till the suet is dissolved, then strain.

XXXIX.

Take of Pearl barley 1½ ounce.

Water 2 quarts.

Boil it away to one-third of the quantity, then strain.

XL.

Take of Linseed ½ an ounce;

Water 1 pint.

Boil for a quarter of an hour, then strain.

XLI.

Take of Starch ½ an ounce;

Water 1 pint.

Mix it the same as for laundry purposes.

These formulæ are recommended in *dy-*
sentery, and I believe deservedly so; but
their benefit will be augmented by the fre-
quency of their use.

K. NUTRIENTS.

XLII.

Take good beef tea, or veal broth, or calf's feet jelly, or thick milk, or isinglass jelly, or prepared sago, or arrow-root, from half a pint to two quarts; and use by injection as occasion may require.

In stricture of the *œsophagus*, *weak stomach*, *ulcerated throat*, *malignant sore throat*, *fever*, &c., the strength of the patient will be very materially supported by frequently throwing up small quantities of either of these; but much has already been said on this subject in the earlier pages of this work.

CHAPTER IX.

OF MEDICATED INJECTIONS IN SOME DISEASES OF THE FEMALE ORGANS, WITH RECIPES FOR VARIOUS KINDS OF INJECTIONS WHICH MAY BE USED IN THESE DISEASES.

THERE are a number of diseases to which females are liable, which may be either much relieved by injections, or entirely removed by them. Amongst these I may enumerate *retention or suppression of the monthly indisposition; painful indisposition; hæmorrhage from the womb; relaxation or a disposition to falling down of this organ; and several forms of whites, or uterine discharges* *. On each of these I shall offer a

* It is the duty of mothers, and those who are intrusted with the education of girls, to instruct them early in the

few remarks; these complaints may be much benefited by domestic management, but it is on the occasional advice of a scientific practitioner, that the greatest reliance should be placed.

In *retention* or *suppression* of the monthly *indisposition*, unconnected with the pregnant state, the judicious employment of *Lave-ments* will often be of the utmost advantage, not only as tending to prevent the costive state of the bowels, in which these ailments frequently originate, but also as essentially promoting this function, by removing spasm and obstruction, and determining an increased afflux of the circulating fluids to the

conduct and management of themselves at this *critical* period of their lives. False modesty, inattention, and ignorance of what is beneficial or hurtful at this time, are the sources of many diseases and misfortunes in life, which a few sensible lessons from an experienced matron might have prevented. Nor is care less necessary in the subsequent returns of this discharge. Taking improper food, violent affections of the mind, or catching cold at this period, is often sufficient to ruin the health, or to render the female ever after incapable of procreation."—*Dr. Buchan.*

obstructed organs. With this view, the patient should take two of the following pills at bed-time, every night for a week previous to the expected period, and continue the same dose on the alternate, or every third night, after the period has passed by.

XLIII.

Take of Aloes and myrrh pill 1 drachm;
 Compound extract of colocynth . . 1 scruple;
 Extract of gentian $\frac{1}{2}$ a drachm.
 Mix them intimately, and form the mass into 30 pills.

A *Lavement* should be used on the following morning, of simple water only, or of thin watergruel, to which a large tea-spoonful of salt may be added; and its temperature should not be lower than 100, or upwards of 112 degrees of Fahrenheit's thermometer.

When retention of *the indisposition* is owing to debility of constitution, tonic remedies, as the preparations of *bark*, or of *gentian*, or of *steel*, ought to be given *daily*, about an hour or two before dinner; and the following pills taken at bed-time; and

Lavements similar to those just recommended used on the following morning.

XLIV.

Take of Compound steel pill 1 drachm;
 Aloes and myrrh pill 1 scruple;
 Compound galbanum pill $\frac{1}{2}$ a drachm.
 Mix them, and divide the mass into 30 pills. Take two of them every night, or each alternate night.

A similar treatment to the above will be employed with benefit, in cases of *difficult* or *painful indisposition*. When the *colicky pains*, which often usher in this function, are urgent, *Lavements*, such as I have recommended, and at the same temperature, will be extremely serviceable; or the following may be used:

XLV.

Take of Water gruel 1 quart;
 Camphor, finely scraped 15 grains;
 Spirits, sufficient to dissolve the camphor;
 Assafoetida, in powder 1 scruple.
 Mix, and use as a Lavement, at the temperature of about 110 deg.

Or the following:

XLVI.

Take of Warm water, or water gruel . . . 1 to 4 pints;
 Camphor 10 grains;
 Common gin 1 to 1½ ounce.
 Dissolve the camphor in the spirits, and add the water,
 or gruel.

In cases of *difficult* or *painful indisposition*, or in suppression of this function, occurring in married females, &c. a *uterine Lavement* will often prove beneficial. Even warm water, at a temperature of from 104 to 110 degrees, will be found of use, injected towards the *uterus*; but medicated injections for these purposes are preferable, and I would recommend the following:

XLVII.

Take of Warm milk
 Warm water, 1 to three ounces, each;
 Spirits of sal volatile, 20 drops to ½ a drachm.
 Mix for an injection.

Or the following:

XLVIII.

Take of Warm water 2 to 6 ounces;
Sub-carbonate of ammonia 5 to 15 grs.
Mix for an injection.

In cases of *hæmorrhage* from the *womb* proceeding to a dangerous extent, medicated injections will often be of service. *Lave-ments* of a cooling nature may be previously employed, under the direction of an experienced medical attendant; and if these fail, I would recommend the following injections to his attention rather than to that of the patient.

XLIX.

Take of Water, at a temperature not beneath 40 or 50
degrees 2 to 6 ounces;
Vinegar $\frac{1}{2}$ an ounce to 2 ounces.
Mix.

Or the following:

L.

Take of Water, at a temperature of from 40 to 60 degrees,
about 4 ounces ;

Nitre about 1 drachm. Mix.

Or the following :

LI.

Take of Water of the above temperature, about 4 ounces ;

Common alum, from $\frac{1}{2}$ a drachm to $1\frac{1}{2}$ drachm ;
according to the urgency of the case.

Dissolve the alum, and use the solution as an injection.

Either of the above injections may be repeated at intervals, according to the effects produced, and the particular circumstances of the case.

In *relaxation* or *falling down* of the womb, the state of the *stomach* and bowels should be carefully attended to. The diet should be light and nourishing: the patient must be kept in the horizontal position for a considerable time, and be confined to a moderately cool bed, or to the sofa. The functions of digestion are to be promoted by tonics,

and the bowels regulated by gentle cooling aperients, but particularly by the aid of *Lavements*, as already explained. Great advantage will be derived in these cases from the use of the following medicated injections:—

LII.

Take of Oak bark, bruised 1 ounce;

Water 2 quarts.

Boil down to one half, and use from 2 to 4 ounces night and morning, or morning only, as an injection. It may be used at any temperature, from 50 to 100 degrees. From 80 to 90 degrees will be most serviceable.

LIII.

Take of the Decoction of oak bark, prepared as above,

from 3 to 6 ounces;

Tincture of catechu, from 1 to 2 drachms.

Mix.

LIV.

Take of the above Decoction of oak bark, (No. 52,)

from 2 to 6 ounces;

Tincture of gall-nuts, from 1 to 2 drachms.

Mix.

The *whites*, or fluor albus, arise from various causes; but in every case attention to the state of the *stomach* and bowels is necessary, and the use of *Lavements* is required. When this disease proceeds from debility, constitutional or local, the above medicated injections (Nos. 52, 53, 54) will generally remove it. But in more obstinate cases the following may be employed:

LV.

Take of the Decoction of oak bark, as above prepared,
about . . 4 ounces;
Common alum, from $\frac{1}{2}$ a drachm to 1 drachm.

LVI.

Take of Rose water 4 ounces;
White vitriol₂ 6 to 12 grains.
Dissolve.

When the discharge appears to proceed from some *organic change* about the *neck of the womb*, and takes place at the *turn of life*, the most scientific and experienced medical aid should be obtained. The above

medicated injections afford only temporary relief; but the following may be employed with better hopes of success :

LVII.

Take of Warm water, about 4 ounces ;
Labarraque's disinfecting fluid 2 to 4 drachms ;
Extract of hemlock 5 to 10 grains.

Mix.

Or the following :

LVIII.

Take of Warm water, about 4 ounces ;
Labarraque's disinfecting fluid 2 drachms ;
Camphorated tincture of opium 1 drachm ;
Extract of opium 4 grains.

Either of these two injections may be used once or twice a-day. The smaller quantity of the ingredients, named in these and in the other medicated injections, may be first used, and the quantity increased to a larger, or even to a still stronger dose, according to the effect produced, and the sensations of the patient. Their use should be preceded by the employment of

Lavements, in the manner I have described; for all the diseases of females may be most successfully prevented, cured, or alleviated, by attention to the state of the *stomach* and *bowels*, and to diet and regimen. I can state this with the utmost confidence, derived from a long and extensive experience in this class of diseases, and from the very great success with which my practice has been uniformly attended.

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CHAPTER X.

ON THE REGIMEN OF PERSONS SUBJECT TO INDIGESTION, COSTIVENESS, AND OTHER AFFECTIONS OF THE DIGESTIVE ORGANS.

HAVING said thus much on the benefit to be derived from the use of simple warm water *Lavements* for the prevention of some diseases, and the cure of others, and given some directions for the management of diseases of a more complicated nature, by the injection of medicated fluids, I must now remind my readers, that health cannot depend *alone* on the employment of these means, any more than on the more usual practice of physic, even under the advice of the most eminent physicians. Remember

that there are other agents to be called in aid, which I believe to be of vital importance: I allude to *air, exercise, sleep, clothing, regular quantity and good quality of food and drink, with medical assistance and advice, &c. &c.* And first, of

AIR.

To prove the importance of this fluid, both as regards life and health, we need only ask ourselves, how long could we live without it? For a few days we may exist without food, or for a few weeks with but a very little; but a few *moments* only could life be sustained without the beneficial influence of the *atmospheric air**. The *blood* that circulates throughout the body is indebted for its *oxygenous state*, or *purification*, to its union with it, whilst *putrescent* matter is thrown off at the same time from

* Dr. Kitchiner observes, "that *good air* is good for our lungs, just in the degree that *good food* is good for our stomach."

the system. The body is also supplied with warmth by the elementary portion of the air termed *caloric*, so that not only our health and our comforts, but our entire existence also depends on its vivifying principle. The manner in which the influence of these invigorating particles are conveyed into the system has been fully treated of in chapter 2, by a description of the form and functions of the admirable machinery of the *heart* and *lungs*, with their various appendages.

“ His Spirit moves our heaving lungs,
Or they would breathe no more.”

How necessary, therefore, must it be that every room in our houses should be *well ventilated*, and more particularly the sleeping rooms, the doors and windows of which are usually shut up the whole of the night. A melancholy instance of the danger of confined rooms, or want of fresh air, was shewn in the fate of our countrymen who were shut up in the black-hole at Calcutta, where, out of one hundred and forty-six human beings

who had been crowded together for twelve hours, only twenty-three survived.

In all cases of fever, or of any disease of an infectious nature, it is of the utmost importance that a strict attention should be paid to the purity of the air of the chamber in which the patient is; and the world are greatly indebted to Mr. Labarraque, a Parisian chemist of eminence, for his valuable discovery of the art of improving the air of filthy and infected rooms, by means of the *chloruret of lime*. No family should be without this valuable preparation in their house, which is used by mixing one part of it to about thirty parts of water, with which a room is to be well sprinkled, as often as may be required, to keep it in a wholesome state.

The climate in which we live is variable, and it is necessary that our constitutions should be accustomed to its changes, otherwise it would be impossible to go out of our houses without the risk of taking cold; and in order to be inured to these changes, a daily exposure, in dry weather, to the

external air is I think absolutely required. If it be asked why are our countrymen so susceptible of cold, and so subject to consumption? I would reply, that it is in consequence of the sudden changes in the air, and from the constitution not being properly trained to meet them. What is to be done? Why, spend one-fourth of our daily time in the *open air* *. Those who are delicate or sickly, should avoid the morning and evening air, and confine their walks to the middle of the day.

Medical men, in hospital practice in London, are well acquainted with the fact, that patients with *fevers, accidents, and wounds*, remain confined a much longer time in the hospitals than those who, with the same maladies, are treated in the country; and that the deaths are in much larger proportion.

* "It refreshes the body, renders it vigorous and healthy, while it imparts composure and serenity to the mind, excites the appetite, renders the digestion of food more perfect, and induces sound and balmy sleep."—Dr. Granville's Catechism of Health, p. 44.

Of the whole population of London, it is a sad truth that one in every forty dies annually, whilst in the country the proportion is not more than one in fifty or fifty-five; where, then, can a better evidence be adduced of the superiority of a country life? Nor, I think, can a better proof be given, not only of the necessity of air, but also of air of the *purest* quality.

EXERCISE.

Examples are constantly before us of the beneficial influence of daily activity: one given by *Plutarch* is worthy of attention; he says that *Cicero* was at one period of his life so extremely delicate and slender, and his stomach so weak that he entirely lost his appetite. He however was persuaded to travel to Athens in the pursuit of health, where he went through a course of gymnastic exercises; and such were the advantages arising from them that he not only soon recovered his health and strength, but his voice, which was faint and harsh, soon became strong and musical.

But if we only make a comparison between the appearance of the *countenances* of persons of sedentary habits, and of those who take sufficient exercise, we should at once be satisfied of the great advantages resulting from exercise. It assists *digestion*; and to the want of exercise, more frequently than to any other cause, the sluggishness of the organs engaged in the performance of this function is to be imputed. The *health** of the body as well as the *energy of the mind*, depend on exercise†; for whilst it quickens the *circulation of the blood*, it strengthens the *tone of the nerves*, calls the *muscles into action*, assists the *peristaltic motion of the intestines*, urges their *contents downwards*, prevents *unnatural accumulations*, and affords us the best means of enjoying fresh air.

* Dr. Buchan observes that "Man was never intended to be idle; inactivity frustrates the very design of his creation; whereas an active life is the best guardian of virtue, and the greatest *preservation of health*."

† Observe, that exercise must at all times be combined with mental amusement, otherwise it depresses instead of invigorating the spirits.

Another proof may be adduced from the effects of exercise on the parts chiefly engaged in it: the hands of a sailor, the arms of a waterman, the back of a porter, and the legs of a ploughman, are always stronger than those of others not engaged in like occupations. The activity of the *intellectual powers* keep pace also with the rapidity of *digestion*; for who does not know that a full and weak stomach makes us sluggish, inactive, sleepy, and sometimes stupid?

Again: the want of exercise hinges on all those affections which deform and enervate the system in early life, and entail disease on the offspring; as *curved spine*, *growing out at the hips or shoulders*, *scrofula*, *glandular diseases**, *bilious disorders*, *nervous irritability*, &c. &c. Recollect, that as digestion is promoted by exercise, so is the stomach emptied, and fresh supplies of nourishment required; so that the appetite

* It is certain that those who take sufficient exercise are never troubled with glandular diseases; whereas few that are indolent escape them.

also is improved. Once more : it promotes all the secretions, increases the usual discharges, urges the action of the large intestines, encourages perspiration, and prevents the obstruction of the *menses*.

Persons who are too weak * to walk, which is, perhaps, the best of all kinds of exercise, should ride on horseback, or take any other exercise within their power that is best calculated to preserve a due equilibrium of the functions of *circulation, secretion, and animal heat*. When patients are unable, from debility †, to indulge in *air and exercise*, the best substitute perhaps that can be offered to them is, the repeated application of *friction* by means of the *flesh-brush* ; but if they are strong enough to bear the exertion, the *dumb-bells* will be found a most useful exercise, particularly for young ladies ; whilst for gentlemen that system spoken of by *Ad-*

* Persons thus situated will do well to divide the length of their walks in proportion to their strength.

† Dr. Cheyne remarked "that the weak and valetudinary ought to make exercise a part of their religion."

dison, Spectator, No. 115, where he says, "When I was some years younger than I am at present, I used to employ myself in a more laborious diversion, which I learned from a Latin treatise of exercises, that is written with great erudition: it is there called the '*fighting with a man's own shadow*;' and consists in the brandishing two short sticks, grasped in each hand, and loaded with plugs of lead at either end. This opens the chest, exercises the limbs, and gives a man all the *pleasure of boxing*, without the blows. I could wish that several learned men would lay out that time which they employ in controversies and disputes about nothing, in this method of fighting with their own shadows. It might conduce very much to evaporate the spleen, which makes them uneasy to the public as well as to themselves."

SLEEP.

"Nature's soft nurse."

Both mind and body are indebted to the

restorative influence of sleep ; and so valuable is it to health, that a substitute cannot be found for it. Those who are deprived of it, soon find their entire system become deranged ; their limbs are weary, their eyes dim and heavy, their appetite lost, and their spirits flown ; and unless they can again soon resume their wonted rest, they feel most wretched.

Hutin, a French author, thus writes :—
 “ Sleep may be defined as the repose of the organs of the senses. When waking has been protracted for any considerable time, we experience a peculiar want, impossible to describe, but known to every body by self-experience,—*the want of sleep*.

“ The motions become languid, the sensations obscure, the arms stretch out, the eyelids close, respiration slackens, the sensations vanish, the intellectual faculties die away, the body assumes a semi-flexed position, and such that all the parts may mechanically rest upon the ground. In this state, man has completely lost the consciousness of his

own existence—he is *asleep*. Hence he no longer exists but for himself only.”

“When tired with vain rotations of the day,
Sleep winds us up for the succeeding dawn.”

Young.

During the fatigues of the day there is a constant call made on the nervous system, and the whole of the frame soon becomes exhausted of its vital energy. The very light that surrounds us becomes irksome as night advances: and the benefit that we derive from sleep is, in a restoration of the tone of the nerves, and the exhausted constitution is in consequence renovated. In disease, we consider sleep as one of the most certain indications of recovery; and to obtain it is a leading object with medical men.

As exercise and air promote digestion through the day, so through the night are the same purposes effected by means of rest and sleep; and many experiments prove, that digestion* is even more rapid during

* “The brute creation invariably lie down and enjoy a state of rest, the moment their stomachs are filled. People who are

our sleeping than our waking hours. The following may be given in illustration of this:—

Dr. Harwood, the Professor of Anatomy at Cambridge, was desirous of ascertaining the different processes of digestion under the varied circumstances of rest and fatigue. He accordingly selected two healthy pointers, of the same age, strength, and size, both of whom he caused to be fed with a hearty breakfast of beef: the one he took out with him afterwards, and gave him a long and hard day's run over a heavy country; the other he locked up in his kennel till his return in the evening; he ordered both to be killed, and on examination of their stomachs, it was found that the dog that had been at rest, and probably asleep the greater part of the day, had completely digested every particle of his food, and that both his *stomach* and bowels were quite emptied; whilst in

feeble digest their dinner best if they lie down and sleep, as most animals do when their stomachs are full."—Darwin's *Zoonomia*, vol. iv. p. 137.

the other, that had been running the whole of the day, the beef was found nearly in the same state as when it was bolted down in the morning—so much for over violent or extreme degree of exercise, and so much for the advantages of sleep.

“One hour’s sleep before twelve o’clock, is worth two after.”

Persons who have attained to a great age, have generally been found to be sound, although not long sleepers; and all such as have been questioned on this subject agree, that they went to bed early, and rose early. This is good proof that the animal fluid which has been expended during the day, is restored again during the night. At the same time, we ought to guard against indulging too much on the downy pillow of rest; as air, light, energy of mind, and activity of body, are conducive to health in the same proportion by day, as sleep is by night. The division of time that generally appears, in all respects, best suited to a

healthy state, at all ages and in all constitutions, is eight* hours in bed, and sixteen hours of mental and bodily activity. By devoting this proportion of time to rest, the equilibrium of health is generally best supported. Some of the most judicious rules for promoting sleep are—to go to bed fatigued, (remembering that sound sleep cannot be attained without sufficient exercise,) to keep the feet warm, the head high, the stomach light, the room ventilated, the bed curtains open, the coverings tolerably warm, and the mind contented.

In addition to these rules, it will be well to remember that the habit of *retiring to bed*

* “In high health, seven or eight hours will complete this refreshment; and hence arises the false inference drawn from an observation, probably just, that long-lived persons are always early risers: not that early rising makes them long lived, but that people in the highest vigour of health are naturally early risers; because they sleep more soundly, and all that repose can do for them, is done in less time, than with those who sleep less soundly. A disposition to lie in bed beyond the usual hour generally arises from some derangement of the digestive organs.”—*Hints for the Preservation of Health*, p. 32.

early has another great advantage, which is that the dampness of the night air is avoided, a circumstance too little attended to, especially by those who are in the pursuit of health. Dr. Lind relates an account of the mischievous effects of night air at Batavia, in his description of the India Fever. "During the sickly season, a boat belonging to the Medway man-of-war, which attended on shore every night to bring fresh provisions, was three times successively manned, not one of her crews having survived that service."

By retiring to rest early, we are enabled to rise by times, and thus to strengthen our constitutions by inhaling the pure and exhilarating air of the morning. Lastly, if you should wake from your sleep during the hours of rest, always remember to turn to the other side, as the change *promotes digestion, and ensures better sleep*; one of Lord Bacon's rules was, "never to keep the body in the same posture above half an hour at a time." The *concoction* of food in the *stomach* is best effected whilst lying on the

left side, but the expulsion of the *chyme* into the intestines is quicker and easier when lying on the right side.

ON CLOTHING.

is essential to health, to take care that our bodies are covered by proper clothing, suitable to the changes of our climate, our age, sex, habits, and constitution. The principal varieties in our clothing consist of linen, wool, cotton, silk, fur, and leather; and of all these, perhaps, for the preservation of human health, we are most indebted to wool; the beneficial influence of which appears to depend, partly on its property of slowly and imperfectly conducting heat, and on its mechanical action upon the skin, promoting and encouraging perspiration, which it readily absorbs, soon discharges by evaporation, and is again, by the heat of the body, dried and ready for use.

To the debilitated, the infantile*, and the aged; to those affected with colds and consumption, or afflicted with chronic rheumatism, gout, or other tedious and obstinate diseases, it is particularly serviceable, and cannot be too highly valued. Flannel should not be worn too long, as its pores become obstructed by the thicker parts of perspirable matter, and it then induces effects as injurious as those produced by a damp linen shirt. I recommend that a flannel shirt, which of course should be next the skin, should never be worn beyond three days in summer, and six in winter, especially by those who perspire much: on the score of cleanliness, alone it ought not to be worn for a longer time. The shirts and drawers of invalids, particularly those labouring under internal disease, should be composed of woollen materials, as should also the stockings,

* The great John Hunter used to say, when speaking of the best means of rearing healthy children, "Plenty of milk, plenty of sleep, and plenty of *flannel*."

particularly of those who suffer from cold legs and feet ;—the fashion of wearing fine cotton and silk stockings has caused the premature death of thousands, this custom having existed now nearly three hundred years.

Stowe relates that “ King Henry VIII. did weare only cloth hose, or hose cut out of ell-broad taffety, nor were any other kind known of till Mrs. Mountague knited a pair of *silk* stockings, which she presented to the queen.” *Stowe* further informs us : “ In the second year of Queen Elizabeth her *silke* woman, Mrs. Mountague, presented her Majestie, for a new yeer’s gift, *a paire of black knit silk stockings*, the which, after a few days’ wearing, pleased her Highnesse so well, that she sent for Mistris Mountague, and asked her where she had them, and if she could help her to any more, who answered her, saying, ‘ I made them very carefully of purpose only for your Majestie, and seeing these please you so well, I will presently set more in hand.’ ‘ Do so, (quoth the Queen,) for indeed I like silk stockings so well, be-

cause they are pleasant, fine, and delicate, that henceforth I will wear no more *cloth* stockings.’’

But let my readers remember that kings and queens, being *human*, have not always been patterns of excellence ; and that though Elizabeth reigned forty-three years after this, and was preserved by the all-powerful hand of Providence to the seventieth year of her age, yet others should not be encouraged by her example to take a similar risk, for persons in inferior stations in life are more frequently subjected to damp and cold, than those whose elevated birth provides them with superior comforts. I, therefore, again urge upon my readers the advantages resulting from *woollen* clothing ; and great care should be taken by feeders of cattle to select the best breed of sheep, both on account of the meat (which is, when good, the best of animal food), and also for the superiority of their *wool*. Dibdin has dwelt upon these points in the following admirable song :—

I.

Our sheep-shearing over, surround the gay board,
With hearts full of pleasure and glee!
And while we partake of the plentiful hoard,
Who so blithe and so happy as we?
From that staple, the wool, all our consequence springs,
The woosack is next to the throne;
It a freedom secures, both to peasants and kings,
Which in no other country is known.
It guards us awake, and preserves us asleep,
Night and day, then, thank heaven, that gave us the sheep.

II.

When bleak piercing winter comes on with a frown,
Frost and snow clogging hedge, ditch, and style,
Annoying alike both the squire and the clown,
Wrapt in wool, we look round us and smile.
Did we sing in its praises from evening to morn,
'T would our gratitude only increase;
The dying old man, and the infant new born,
Are both kept alive by the fleece.
Then how with the truth a fair pace can we keep,
When in warmest expressions we speak of the sheep?

III.

No words are sufficient, whate'er can be said,
To speak out its praises aloud;
For it never forsakes us,—nay, after we're dead,
It furnishes even our shroud.

Nay more, if the sheep, while it ranges our fields,

For our wants all those comforts supplies,

Faithful still to the last, to the butcher it yields,

And for our daily nourishment dies.

Thus, living or dead, we its benefits reap—

Then, ye sheep-shearers, sing your true friend—the poor
sheep.

Linen is also a useful article of clothing, and in the summer season promotes cleanliness and health, if frequently changed; if not, it becomes dangerous to the wearer, as it retains for a long time the perspiration, becomes cold, and is likely to induce cold and fever;—therefore, those who perspire much should avoid it as an under garment.

Cotton may be regarded as an intermediate kind of clothing; and those who object to the bulk, warmth, or irritating qualities of the wool, or the cold, damp nature of linen, may find in this article of dress a good substitute; possessing as it does at any rate one great advantage to the purchaser, which is, that it is the cheapest of all kinds of dress.

Silk clothing ought rather to be regarded

as an article of luxury and show, than of service to health: for the benefit of trade, however, let those only wear it, who can afford to pay the doctor.

Furs are not suited to the health of persons in this climate, and should be only worn as exterior dress for the purpose of ornament. The objection to them is their stimulating qualities, by which too much perspiration is encouraged, which is weakening to patients. They wear well in the colder northern regions, and are to the inhabitants a source of great comfort.

Leather has of late become an article of under dress; how long it will continue so, I know not, but I must say, that it does not appear to deserve the encomiums that some bestow on it. I should think it of too close, compact, cold a nature to be compatible with health, inasmuch as the perspirable matter of the body does not evaporate through it, as is the case with manufactured clothes, which are generally of a porous texture. It has, however, its advocates.

Great care should be taken to select such articles of clothing as will encourage the natural secretions of the skin, or, at any rate, to avoid such as are likely to check its discharge, as the insensible perspiration which ought to be continually oozing through the pores, is an evacuation of as much, or perhaps more importance, than either that of the bowels or urinary bladder ; in truth, the two latter are dependent for their proper performance on the healthy condition of the former.

Be careful, also, to regulate your dress according to the season of the year, the changes of the weather, hot or cold, wet or dry, north or south wind ; above all keep the feet dry and warm, and cover the chest with a piece of *double flannel*, and observe that your *hat*, *shoes*, and *great coat* be kept in a room in which there is a fire during the winter season.

ON THE PERIODS FOR EATING AND DRINKING.

Any increased degree of the sensation which we call hunger, is termed *appetite*, which of course varies in proportion to the exercise we take, the rapidity of digestion, the length of interval between each meal, or to the amount of losses which the body incessantly suffers, &c. &c. Appetite when gratified affords the most pleasurable feeling, but on the contrary if resisted, it is altogether as painful. Very shortly after the stomach becomes in a state of vacuity, the sensation of hunger commences, which gradually declines as a fresh meal is taken ; an extreme quantity, or what is termed an overloaded stomach, soon produces disgust ; we should, therefore, be regular in our habits for these engagements, perhaps more than any other ; for in proportion as these are conducted, so will be, in a great degree, the habits of our digestive organs*. If we

* “ Those who have weak stomachs will be better able to digest their food, if they take their meals at *regular hours* ;

only consider how much our health depends on digestion, we shall not, I am sure, neglect any means by which it may be improved or supported.

We are all acquainted with the effect of habit on many of the leading features of our life. A person accustomed to rise at five o'clock in the morning, cannot sleep after that time; persons who indulge in a sedentary life, feel no disposition for air and exercise; those who dine at twelve or one o'clock, cannot, without much inconvenience, wait till four or five; those who take a dram in the morning, or smoke tobacco in the evening, seem not at first to do well without them.

As it is necessary, then, on account of the rapid action of the juices of the stomach on the food, that it should receive a fresh supply about every four hours, certainly it must be clear that the whole of these meals should not be crowded into one;

because they have both the stimulus of the aliment they take, and the periodical *habit* to assist digestion.'—Darwin's *Zoonomia*, vol. i. p. 454.

and equally obvious, that as regular a division of the periods between each should be arranged, that the stomach may be relieved of one load before another is imposed on it, and then the *effect of habit* will be shown here also, as hunger will announce its readiness for a fresh supply at the appointed hour.

The principal points I wish to urge respecting this subject are, that the period between the *meals* should not only be regularly divided as to time, but also that their weight or bulk be in proportion to their nutritious character. I would recommend the quantity of each to be moderate, particularly of each alternate meal, as best adapted to persons in health ; I would say, therefore, make a good, nutritious breakfast at eight o'clock, having been dressed for at least an hour previously. At twelve o'clock, I advise what is termed a "lunch," which should consist merely of a biscuit, with a small piece of old digestible cheese, or butter, and a glass of sherry. At four o'clock, a mode-

rate dinner of animal food, with a sufficient quantity of seasonable vegetables, the whole diluted with good home-brewed table-beer, or water, and followed by not more than three glasses of foreign wines. At eight o'clock, coffee or tea, (if they have been found to agree with the constitution,) and biscuits or stale bread and butter, which should be the last full meal: and, as ten or eleven o'clock is a proper hour for retiring to rest, if it have been *sanctioned by custom*, it is frequently found a necessary practice to take a *small* glassful of weak *spirits** and

* Dr. Kitchiner says, "We caution those who are past the meridian of life—to beware of suddenly abandoning established customs." And Dr. W. Philip, in his valuable work on Indigestion, p. 121, edition 6th, where speaking of spirits, or, as chemists term it, *alcohol*, says, "Like most substances capable of powerfully affecting the animal frame, they possess *valuable* as well as *pernicious* qualities; and, were the former of these less eminent than they really are, so general is their use in one form or other, and in most people the habit, which requires their continued use, so fixed, that they seldom can be wholly withdrawn, except in very early life, *without doing more harm than good*." I quote these authorities, because in the early editions of my work I was

water, or sherry negus, (Hollands or good gin is the most wholesome,) and a plain biscuit, or part of one, with it. This will excite the action of the *stomach*, assist digestion, and promote secretion. To those in inferior stations in life, whose avocations require them to rise very early, or whose employments stimulate the action of the digestive organs in a greater degree, a system of dietetics is also essentially requisite, and should be suited in like manner to the state of the *stomach*; of course, commencing with the first meal earlier, and regulating the calls of hunger by observing similar rules suitable to their station.

I am well aware that on the subject of *spirits*, I shall incur the opposition of many medical men, but this will not deter me from offering the opinions I have been from

criticised for sanctioning, as I still do in my present book, the *moderate use of spirits under proper regulations*. It is the "*abuse*, not the *use*," that I refer to; and I believe there are few physicians even who do not take themselves as much or more than I have here prescribed, however much they may say [or write against the practice.

observation enabled to form, for the perusal of my readers. Physicians that have written on this subject endeavour to draw a very nice line between the effects of spirits and the effects of wine. Now, in truth, wine is spirit*, with this difference, that wine partakes of the flavour of the various fruits that enter into its composition, and contains a larger proportion of water than it does of spirit, (being the expressed juice of fruits subjected to fermentation,) whereas *brandy* is produced by subjecting *wines* to the process of distillation, by which the spirit is separated from the watery parts, and it of course contains a larger proportion of spirit than it does of water; therefore, if it takes one quart of wine to produce intoxication, it will take about one-third of a quart of brandy to produce the same effect; and if, therefore, to the one-third of a quart of brandy you add two-thirds of water, you reduce it to pretty much the same thing. It

* "One quart of sherry wine contains three ounces of highly rectified spirits of wine."—*Newman's Experiments*.

is on the *strength* of liquor or of wine that their pernicious qualities depend; and I consider that their repeated action on the *stomach* would be analogous in effect to that of continually pouring hot water of a high temperature upon any part of the body, which, though painful at first, by degrees becomes accustomed to the stimulus; or to the hands of a blacksmith, who will deliberately, and without experiencing inconvenience, handle iron so hot that it would raise a blister on the hands of another person; on inspection, the skin will have become so completely thickened, hard, and deranged, and callous to all the finer sensitive feelings of touch, that its functions will be altogether destroyed. In like manner I consider that the stimuli of strong spirits, repeatedly taken, will destroy, first the texture, and then the functions of the *stomach*. This derangement of the *stomachs* of those who are habitual drunkards, or hard drinkers, producing a thickening and induration of its coats, is very frequently the forerunner of a

scirrhus state of this viscus. At the same time, therefore, that I regard the *use* of spirits as a valuable medicine, and consider that persons whose *stomachs* have been accustomed to its stimulus, may occasionally require its repetition to assist digestion, yet I must warn all *young* persons in particular of its pernicious tendency.

The ill effects of spirits are felt in some habits sooner than in others, and this is to be accounted for, first, by the various degrees of natural strength of constitution, and next, by the proportionate power of the *stomach* itself to resist the operation of hurtful or deleterious substances; for what I have here said, is not with the intention of advocating or recommending the use of spirits,—on the contrary, I am of opinion that those who have never tasted them had better never begin; but I contend, that *stomachs* that have been accustomed to the stimulus will not do well, if it is too suddenly abandoned.

That able writer, Dr. David Uwins, in his

Treatise on those Diseases connected with Indigestion, p. 237, thus writes on the question of the propriety of indulging in fermented and spiritous liquors:—"Who shall deny that their copious use has proved a large occasion both of physical and moral evil? But because things are *misused*, it does not follow that their use is to be foregone; and perhaps it would be difficult to prove that man, as he is at present constituted, could do altogether without the products of fermentation."

The last subject to which I shall refer is, that, although the leading object of this work is avowedly to recommend the use of *Lave-ments* of warm water for the prevention of simple, and frequently for the cure of more obstinate diseases, and the use occasionally of some medicated injections, yet, when disease assumes a violent character, our own domestic judgment ought never to be relied on; and, in a country where every opportunity is afforded for the promotion of medical science, no difficulty can ever prevent

the calling to our aid the judgment of men who are the ornaments of their profession and of society; and to them only can we look with confidence in cases of difficulty and danger. I trust that the rules which I have laid down, with the hints that accompany them, will, in some measure, assist in deterring the public from the dangerous practice of trusting to empirics—of spending their property and risking their lives, by flying for relief to the advertised nostrums of the day.

OBSERVATIONS.

Let it be remembered that a proper attention to the condition of the *digestive organs* is of primary consequence in every stage of life. Not only will disease be prevented by it, but in almost every malady to which we are liable, even of the mildest and most simple nature, the cure must depend more on this than on any other measure.

Observe, also, that the most trifling deviation from *health* is *disease*; even a scratch on the flesh, a corn on the foot, a cold in the

head, might and have produced fatal terminations; and even should they pass off without apparent mischief, still every ache and every pain must be subtracting from our natural period of existence, and will (like the dropping of water, which, by its constant repetition, wears through a rock) abridge our strength, and if not so rapidly, yet as certainly as the ravages of disease of a more palpable description.

Further, it must be obvious to every reflecting mind that the liability to danger in consequence of accidents is greater or less in proportion to the previous sound or unhealthy state of the constitution.

If the functions of the bowels be properly attended to, so as to keep them regularly open at least once in every twenty-four hours, I assert, that with very few exceptions, exclusive of those from accidents, perfect health may be relied on. And here allow me to add, that regularity with regard to the hour at which nature should

be relieved, is of more consequence than is generally supposed. Let the individual fix on a stated time (I have before said that immediately after breakfast is the period most convenient, as well as the best, in all respects); and whether he has an inclination or not, let him urge and encourage an action of the bowels, by which attempts, in a short time (such is the effect of habit on the system) relief will always be obtained.

In order that the digestive organs may perform their offices with the greatest advantage, it is necessary that they have not too much to do at once, remembering, that a little well done, is better than a great deal badly done; in short, never overload the stomach*, but rather leave the table with some degree of appetite: this, by custom, will be found infinitely more agreeable than

* Dr. Arnott, in his *Elements of Physic*, p. 623, observes, that “a *full stomach* produces tension and projection of the belly—projection of the diaphragm into the chest, causing hurried breathing and impeding speech.

the disgusting habit of gorging* till ready to burst. For whatever is taken into the *stomach* beyond that which is convenient, is *hurtful*, inasmuch as there is only a sufficient quantity of the dissolving† fluid, called *gastric juice*, for the natural and proper digestion of just as much nutriment (and no more) as is required for supporting our existence; all beyond this becomes, in consequence of the heat and moisture of the stomach, soon decomposed and putrid; in which state it is taken up into the system, and thus lays the foundation of innumerable diseases, such as apoplexy and gout. To medical men, it is evident that they are produced by the causes I have

* “We often tease and disorder our stomachs by fasting for too long a time; and when we have thus brought on what I may call a discontented state of the organ, unfitting it for its office, we sit to a meal, and fill it to its utmost, regardless of its power or its feelings.”—Abernethy's *Surg. Obs.* p. 70.

† The experiments of Spallanzani sufficiently proved the solvent power of the *gastric juice*, having ascertained that when collected it possessed the same capability of converting meat, out of the stomach, into a mass, as it had previously in the stomach.

stated, and leave no doubt but that a vast number more persons die from excess in eating than are annually killed by the vice of intoxication.

Next in importance to *quantity* is the *quality* of nutriment, both as regards *purity** and *simplicity*, which the experience of ages fully proves ; but should additional evidence be necessary to maintain this fact, we have only to notice the squalid, emaciated, or else bloated, countenances of the rich, who indulge in luxuries, and compare them with those persons whose walk in life is a little below mediocrity. If the stomach were made of iron or brass, or even silver and gold, or any other hard metal, instead of the durable substance of which the all-wise CREATOR has constructed it, such materials would not last as many days as it now does years of our natural life. I say it would be impossible for these substances to be pre-

* The Egyptian remedies for diseases produced by *impure* or foul diet, consisted in *abstinence*, *vomits*, and *glysters*.—Diodorus Siculus, historian of Egypt.

served under the application of such chemical decompositions and unnatural combinations as those with which our stomachs are generally supplied—as, first an acid, then an alkali, now a bitter, then a sweet, now a dram, then an ice*, now hot soup or burning tea, then cold beer or water, &c. —with every thing the ingenuity of a foreign cook can invent, to fill the stomach with heterogeneous masses of all that is unwholesome and opposed to common sense—are causes sufficient, to account for the bulk of those infirmities to which we are subject.

The *quality* of food should be as simple as possible, on account of the chemical changes it has to undergo in the *stomach*, and its being more assimilated with other matters previously received, as well also as

* The public prints lately gave an account of a young gentleman who on his way to the theatre after tea, from the west end of the town, called at a pastry-cook's and partook of a raspberry ice, immediately after which he had cold shiverings, was taken home in a coach, and died the same evening.

its being generally better adapted to the powers of a weak stomach. If *chemical decomposition* takes place, the result will often be that the patient is troubled with sour eructations ; if the food is not of an *assimilating nature*, only a part of the contents of the stomach will be rendered fit for chyle, while the remaining portion will pass off through the intestines in an indigested state, without affording the least nourishment, thus imposing on the organs an useless and hurtful labour ; and if the food is of a *tough unyielding* disposition, the muscular tone of the stomach will be impaired in its triturating process.

That able and talented writer, Dr. George Fordyce, in speaking of the formation of *acid* in the stomach during digestion, says “ It is always produced by the digestion not going on perfectly, the powers of the stomach not being sufficient to overcome the disposition of vegetable substances to run into the saccharine, vinous, and acetous

fermentations, and that when the organs of digestion are weak or disordered, or when we give an animal food not adapted to its organs of digestion, a greater or less portion of the food is not governed by the stomach, but runs into the fermentations which would arise if they were not influenced by its power."

Having alluded to the ill consequences of an overloaded stomach, as well as to the injury it is likely to sustain from food of an irritating and pernicious quality, I yet do not wish to be understood as recommending that at every meal we should be provided with scales and weights for ascertaining the exact number of ounces to be swallowed, nor a graduated measure for dividing our beverage into potions; this would be inconsistent, as every one knows that the cravings of the stomach are continually varying in proportion to the bodily or mental exercise, sleep, changes of air or wind, perspiration, occupations, or state of digestion, to which we are subjected, and that necessarily nature must require more

support at one time than at another. Neither do I urge that every meal should be so simplified as to consist of a repition from day to day of one particular kind of food—mutton! mutton!—always; on the contrary, a well-selected variety of mild, nutritious, digestible food, both of the animal and vegetable kind, will enable us to effect that change which is both pleasant to the palate and essential for the preservation of health and prolongation of life.

It is impossible to lay down a definite system of diet, it is a question involved in much perplexity, and has ever been a subject for controversial writers; an organ like the *stomach*, which has been known to *digest* brass buttons, pins, and even *clasp-knives*, while others, on the contrary, have suffered the most serious inconvenience by the mere smell of something offensive, or the reception of a trifling quantity of food of apparently the most simple kind *, appears so inconsistent

* It is related by Dr. Scudamore, in his Treatise on Gout, that Dr. Spurzheim had informed him, that his coadjutor, Dr.

in the execution of its functions, as almost to defy any attempt at prescribed rules for diet, —and when again we hear that every thing that moves on earth, air, or sea, even man himself, is devoured by man, the catalogue is so swelled that we are almost compelled to conclude, that what appears in general to sit easy and digest freely, is the food that we should take. The English appear to us to live the best; the French system of diet is different, and of course they think their's the best. I remember, on one occasion, when dining at a Restaurateur, in the Palais-Royal, that I counted the variety of articles that composed the bill of fare that was presented to me by the waiter, which was four feet in length, and contained a list of four hundred and fifty-seven articles. The following extract from the Calcutta Literary

Gall, could never partake of *mutton*, dressed in whatever form it may, without suffering irritation in his stomach to a most distressing degree; proving that in some idiosyncrasies the most wholesome and mild food is the most injurious.

Gazette will show the various tastes of different nations as well.

“ In some valleys of the Alps, the rearing of snails is carried on as a trade, and in the month of September they are sent down the Danube to Vienna and Hungary, where they are sold as an article of luxurious food. In South America nothing in the shape of life comes wrong to them—they eat serpents, lizards, and ounces; and Humboldt has seen children drag enormous centipedes out of their holes, and cranch them up. At Emeraldi their delicate *morceau* is a roasted monkey. Puppies, on the Missouri and Mississippi, are choice food. Horse-flesh in Arabia; elephants' flesh in India; camels' flesh in Egypt. The Pariahs of Hindostan contend for putrid carrion with dogs, vultures, and kites. The Chinese devour cats, dogs, rats, and serpents; bears' paws, birds' nests, and sea-shy, are dainty bits. The inhabitants of Cochin China prefer rotten eggs to fresh. The Tonquinese and inhabitants of Madagascar prefer locusts to the finest

fish. In Australia a good fat gull would be preferred to every thing else; and in the West Indies a large caterpillar, found on the palm, is esteemed a luxury; while the edible nests of the Java swallow are so rich a dainty, that the ingredients of the dish will cost 15l.* The quantity of frogs seen in the markets of the Continent is immense. At Terracina the host asks his guest whether he prefers the eel of the hedge or that of the river. The astronomer De la Lande was remarkably fond of spiders. Great Britain even transcends her continental neighbours. The ‘braxy’ of Scotland is putrid mutton, the sheep having died of the rot; game and venison is seldom relished till it is ‘high,’ or, in honest language, till it is a mass of putrefaction, disengaging, in abundance, one of the most septic poisons the chemist knows

* The nests of the Java swallow are found in deep caverns, and are composed of certain marine substances, which the bird collects, that adhere together, and appear to resemble isinglass; it being a great dainty, is only eaten by persons of rank or opulence.

of ; in numerous cases it is a mass of life and motion, the offspring of putridity. Pigs are still whipped to death ; lobsters are boiled alive ; cod are crimped ; eels are skinned, writhing in agony ; hares are hunted to death ; and *white* veal is the greatest luxury."

The author had himself an opportunity, a few years since, of witnessing the depraved taste of some Russian sailors, at the time their fleet lay at Spithead, some of whom came on board the vessel in which he was sailing, and were observed to cut raw potatoes and carrots into slices, and even to steal the candles, and dip them into the dirty train oil (the refuse from the lamps in the binnacle), which they ate, and appeared to relish as dainty morsels !!

Of general diet in indigestion and costiveness, I have treated in the sixth chapter of this little work : I shall, therefore, in these observations, only add that I am no advocate for that precision which marks the character of some of the Doctors of the old school, but I would rather imitate those men whose

understandings have arrived at maturity, and are, or ought to be, the best judges of the quantity of food the stomach will contain and digest easily, as well as the kind of food that affords the most nourishment to the system, with the least possible injury to the digestive organs. At the same time I feel myself here bound to acknowledge that I have been induced from conviction to adopt, (for the preservation of *my own health*,) a system approaching as near as possible to the precepts laid down by Moses, in the Holy Writings; and I avail myself, therefore, of this opportunity to recommend to those of my readers who are sincerely in *pursuit of health*, a learned and excellent little volume from the pen of that talented surgeon, Mr. Warren, entitled "A Discourse upon National Dietetics, &c." published by Longman and Co., Paternoster Row, wherein he has plainly shown the importance of *scriptural diet*, and the complicated evils of its neglect. He observes that "Moses, in Deut. chap. xiv., lays

down his code or precepts for eating, and enumerates those kinds of meat which are clean or wholesome, and at the same time warns the Jews from all those which are unclean, unwholesome, abominable, or polluting*.” As I have referred my readers to this intelligent work, I must leave it to their own in-

* “The injunction against eating *swine’s flesh* given by Moses, is so remarkable as to render it worthy of particular attention in our dietetical inquiry. Viewed without any reference to previously acquired notions, this animal presents remarkable and singular peculiarities. Among all other animals, this is marked by the property, or capacity, of converting from vegetable refuse the greatest quantity of animal fat; and to so great an extent does its assimilating powers extend, that the excrementitious productions from swine are defective in the common properties of manure from other animals. It makes no second chewing of its food: it will feed and fatten upon almost any rubbish, the grosser parts of vegetables, or the disgusting refuse of the slaughter-house, and objects not even to the flesh of its own offspring,” and, the author might have added, to human flesh. “An animal, then, so widely differing from the ox, sheep, deer, and other creatures affording food, may naturally be expected to differ in the qualities of its flesh; and according with such an anticipation, we do find its flesh defective in the

clinations to search the Sacred Writings in confirmation : I shall only add, as a general remark, that the Bible being true, I conceive we are as much bound to adopt these precepts for our diet as we are the commandments of Scripture, which have been written for our guidance. In conclusion, it would be injustice to Mr. Warren, were I not to declare that, since I have adopted the system of diet * inculcated in his work, in conjunction with *another important discovery in medical science for the prevention and cure of gout*, my own health has greatly improved ; and the fits of this disorder, to which I had for years been a martyr, have

esteemed qualities of other meats ; hence its fibre has not the ruddy colour or firm texture of mutton, beef, or venison, but presents a sickly paleness of colour, and a loose flaccid texture, which in those other meats would be the disgusting proof of the animal having died, or been killed in a diseased state. In summer, the general appearance of its flesh is so unsightly as to be universally deemed unwholesome, or the idea is veiled by the more refined term ‘ out of season.’”—Warren on *National Dietetics*, p. 24.

* Moses forbids the eating of swine’s flesh, fish without scales, animals that are not slaughtered by bleeding, &c.

altogether ceased to attack me ; and I have had much pleasure in hearing of several cases of scrofula and consumption, that have also been entirely cured under this plan of treatment.

In a clever little book, entitled “Simplicity of Health,” page 138, we read as follows :—
 “It is not a little amusing to observe the anxiety that people evince to know what is said by medical writers to be *wholesome* and *unwholesome*. When they take up a work of advice in diseases, or on the preservation of health, after looking at the book that treats upon the complaint that affects themselves, they hurry through to see the author’s approval or condemnation of the different kinds of food and drink in general use. They then say, ‘I find that I must take more of this, I must leave off that entirely* ;’—this sort of

* Persons somewhat advanced in life would, by common observation, very well know that if they were much troubled with flatulence, or heart-burn, that they had an excess of acidity in the stomach, and that it would be relieved by taking a little cretaceous mixture combined with a carminative.

anxiety is nothing less than ridiculous: it never furnished an instance of longevity.

“On examining the domestic history of those who attained to extreme old age, we find that they gave themselves little trouble about such matters. They mostly ate and drank indiscriminately of what they knew was *not decidedly unwholesome*, and which did not particularly disagree with their constitution, (a knowledge that requires neither learning nor science,) rose early, were of active and exercising habits, temperate and sober from choice, and were not afraid to be overtaken by a shower, when unprovided with a great coat or umbrella.”

Although so much nicety is not absolutely necessary in supplying and supporting the *stomach* as is recommended by some, and practised by others, yet there are times when this organ requires more than usual humouring, on account of the derangement to which it is liable in consequence of its great disposition to sympathize with every other part of the body; and even allowing, as I

do, that food of a solid nature is generally best suited to its functions (see account of the Penitentiary dieting, page 121 of this work), yet there are times, when, from an exhaustion of its energies, or from a deficiency of its secretions, it will digest with greater ease* a basin of arrow-root, chicken broth, or boiled custard, than it could a solid meal of meat. Therefore, I would lay it down as a maxim, that the food should be adapted in quantity and quality to the powers† of the

* “Whether we ought to make use of articles of easy or difficult digestion, cannot be determined by general rules: every person must attend to the effects, which substances of different degrees of digestibility produce on his stomach. The chyle, when prepared of substances not easily digestible, is solid and concentrated, and consequently affords a substantial muscular fibre; but such substances as the stomach cannot digest, ought never to be used as food.”—*Lectures on Diet and Regimen*, by A. F. M. Willich, M.D.

† “It is by no means a fair inference, that what produces very injurious consequences in some, must do more or less harm in all. We frequently see articles of diet, and still more frequently medicines, which cannot be borne by one stomach, perfectly innocent to another.”—Dr. W. Philip on *Indigestion*, p. 127.

stomach at the time of eating. Should I be asked why solid food is best adapted to the functions of the human *stomach*, I reply, that it is known and proved by experience, that animals of the inferior kind thrive better on dry hard substances than they do on larger quantities of moist or soft food; for instance, the horse, when fed on oats and hay, is capable of performing ten times more labour than when fed on grass or clover; for it appears that the *stomach* is an organ requiring a quantity of unassimilating matter to extend its bulk so as to call its more energetic principles into action. This would not be accomplished by adhering to a simple fluid-like kind of gelatinous nutriment.

Let it not be supposed that, by showing the importance of *solid* food for our support, I mean that *animal* matter should form the larger portion of our aliment; on the contrary, I am of opinion that we all indulge too much in this sort of food *, and that it

* Shelley was of opinion that abstinence from animal food

would be better for us individually, and far better for society in general, were we to use more vegetables in our diet*. Meat is highly stimulating and always produces a temporary fever†, which every person is acquainted with, who observes the sparkling eye and flushed cheek produced after *flesh* meals; by which (as in all inflammatory fevers) the energy of the system must be destroyed by a continued and excessive de-

subtilized and cleared the intellectual faculties. For all the sensualities of the table he had an ineffable contempt, and, like Newton, used sometimes to inquire if he had dined.

* “We learn from the London bills, that scurvy raged to such an excess in the seventeenth century as to have occasioned a very great mortality: at this period the art of *gardening* had not long been introduced. It appears that the most common articles of the kitchen garden, such as cabbages, were not cultivated in England until the reign of Catharine of Arragon; indeed, we are told that this queen could not procure a salad until a gardener was sent for from the Netherlands to raise it. Since the change thus happily introduced into our diet, the ravages of the scurvy are unknown.”—Dr. Paris on *Diet*, 2d edition, page 124.

† Meat is required for those who earn their livelihood by the sweat of their brow, in a much larger proportion than for the Bond-street loungee.

mand on its vital fluids. Again, it would appear by analogy, that animal food in too great proportions, by its excessive stimulating qualities *, has also a tendency to brutalize our dispositions and habits, by producing the most injurious effects on the mind, whereby we are less mild, gentle, and affectionate one to the other. The Tartars live chiefly on meat, and are described as a most brutal, savage, cruel, and vicious set of brigands. On the contrary, the Hindoos live solely on vegetables †, and are characterized as a harmless, meek, and amiable people. I might also adduce that all *ferocious* beasts and birds are carnivorous; for instance, the lion, tiger, wolf, fox, eagle, hawk, &c., while the *tamer* kind, such as the cow, sheep, hare, rabbit, pheasant, dove, &c. are *graminivorous*. A story is told of a person who trained up a tiger to follow him about like a dog,

* The nutritive qualities of *meat* are, fibrin, gelatine, albumen, osmazome, caseum, butter, fat, &c.

† The nutritive qualities of *vegetables* are, sugar, secula, gum, mucilage, acids, oils, jellies, gluten, tanin, &c.

and that he was in all respects as familiar and domesticated, which he had been able to effect by entirely feeding him on vegetable food; that one day he was taking his accustomed walks in the fields, when, happening to scratch his finger with a thorn, and allowing the animal to lick the blood, he immediately sprang on him and tore him to pieces.

We have lately had an opportunity of observing in an exhibition at Drury-Lane Theatre, that Monsieur Martin, by feeding lions entirely on vegetables, is as familiar with them as we are with a domestic cat.

A further proof that the aliment contained in vegetable matter is suitable food for carnivorous animals, is given in a splendid work lately published, entitled “The Gardens and Menagerie of the Zoological Society Delineated.”

The Author says, speaking of bears that had been confined in the pits of Berne, and others in the Menagerie of the Jardin des Plantes at Paris, the former for thirty-one years, the latter for forty-seven; in both

establishments their only food consisted of bread, occasionally varied by the addition of fruits and vegetables.—At Berne, in particular by a regulation of the police, all the unripe fruit that was brought to market was ordered to be given to the bears. *They were never allowed to taste of flesh;* and their thriving condition proved that such an addition to their usual diet was perfectly unnecessary to the maintenance of their *health*.

It is a curious fact, that the *chyle* produced from a diet of vegetable substances alone, appears in no way different from that produced by a diet of animal matter; and that the blood and flesh generated by either, is so similar as to make it extremely difficult, if not impossible, to detect the difference; a fact, sufficient to oppose the prevailing opinion, that vegetables do not contain a sufficient quantity of nutritious matter to nourish and support the body. But a much stronger proof of its capability of sustaining life is, that by far the greatest

number of animals in the creation subsist entirely on the substance of vegetables; and that this is not confined to animals of a slothful, inactive nature only, but to animals the most powerful, muscular, and active. It is well known that that stupendous quadruped the elephant will travel eighty and a hundred miles in a day, heavily laden, beneath the burning sun of India, subsisting entirely on vegetable substance; and in our own country, that powerful, active, and noble animal the horse, whose abilities for enduring fatigue are truly astonishing, is nourished on its natural food of vegetable matter also. Besides which the properties of vegetable food are not only confined to the mere support of life, but also impart to animal flesh a richness of flavour with a superabundant quantity of oily juices and fat*; we may, therefore, justly conclude that the

* Those who are curiously disposed on this subject should visit Leadenhall market at Christmas, and observe the prodigious quantities of fat that cover the flesh of the sheep and oxen at this time.

substance of vegetables is well calculated to support the vigour of the body, to encourage its growth, to repair its waste, to supply sufficient strength, and to preserve sound health.

Not only are *animals* thus supported, but by far the greatest number of the human species also live and thrive entirely on the productions of the vegetable kingdom; and in our own country a very large proportion of the inhabitants, particularly the peasantry, who subsist on brown bread and potatoes, possess sound health, look well, labour hard, and whistle a cheerful note.

But as Europeans are more accustomed to animal food than perhaps some other inhabitants of the globe, and, as an industrious, active, labouring people, numbers from habit require it, I shall, whilst on this subject, simply recommend that vegetables compose a larger portion of our diet * than

* Dr. Paris observes, "that in our climate a diet of animal food cannot with safety be exclusively employed. It

custom generally sanctions. It appears also, by the formation of our *teeth**, it was intended that both kinds of food should comprise our sustenance, the human teeth being peculiarly constructed for tearing and grinding, they are both naturally indicated. Then as regards the necessity of a proportion of unassimilating matter, this can be obtained as well from the vegetable as the animal creation, or *vice versa*.

We should remember also to regulate our system of diet in conformity with our age, habits, infirmities, and avocations; remembering at the same time, that our *stomachs*, too, naturally differ from each other quite is too highly stimulant; the springs of life are urged on too fast, and disease necessarily follows."

* Care should be taken of the *teeth*, seeing how necessary they are for the preservation of health; if they become loose, they should be fastened, and if they are decayed, they should be replaced by artificial ones, which are now found efficient for the purposes of mastication.—And I here beg to offer to the reader my testimony, in addition to the many already published, of the adroitness, at the same time ease, with which these simple operations are performed by Monsieur Jouil Mallan, 9, Half-Moon Street, Piccadilly.

as much as one man's countenance differs from another's; in short, that no two are precisely the same, and that, therefore, "what is meat for one, is poison for another." Again, independently of the *natural disposition*, there is the *education* of the *stomach*; it would be worse than nonsense to suppose that the *stomach* of the plough-boy and that of a nobleman were the same; the *stomach* of the abstemious and that of the drunkard, the *stomach* of the student and that of the sportsman, the *stomach* of the indigent and that of an alderman, the *stomach* of the dandy, laced up in stays, and that of the robust farmer;—would it not be madness too to suppose also that the infant rising into life, or the decrepid, infirm old man, tottering on the brink of his grave from declining strength and worn out muscles should require, or even be able to bear, the stimuli of invigorating wines, high-flavoured condiments, or generous dieting, equally with those who, full of blood and activity, do, by exercise in the open air,

arouse every feeling both of a bodily and mental nature * ? To support, then, an equilibrium in the system, is the grand art of preserving health, that the waste and the supply may be brought to a tolerably correct balance; in fine, to take care that what is discharged from the body from its various outlets should keep pace with what it receives; without this regulation, it must be oppressed with supplies, or exhausted by evacuations.

One of the best examples of the advantages arising from pursuing a regular system of dieting is recorded of Cornaro, a celebrated Venetian nobleman, who attained the great age of 107 years, as stated by his niece, who was the inmate of a nunnery at Padua. It appears that this great man had lived a dissipated life up to the age of forty-three, about which time he began to find his strength fail, and his constitution on the decay, and he was induced to consult some physicians in Italy,

* Very old persons require to be fed often, because absorption goes on but slowly; while infants should be fed often, because absorption is too quick.

who in vain endeavoured to restore his health by medicines, and he was reduced by disease to the lowest degree of human infirmity. Cornaro's mental sufferings at this time kept pace with his bodily diseases, and his reflections awakened in his mind such a dread of death, that he was led to regard *long life* as an inestimable blessing, and he from that time determined, if possible, to attain it by adopting a system of temperance; to avoid spirituous liquors, and all high-seasoned viands; to limit the quantity of his food, and partake only of one plain dish, merely sufficient to satisfy the cravings of nature; to retire early to rest, and to rise betimes in the morning; to avoid damp air, to keep his feet warm, and body and mind in a state of tranquillity. Nor was it long, under these regulations, before he had the satisfaction to find himself gradually return to health and cheerfulness; and he was able, at a very advanced period of his life, to partake of the pleasures of the chase, and most other amusements, in common with the young men

of his country ; and that he might diversify his taste for pursuits at eighty years of age, he wrote an entertaining comedy. But whatever constituted the variety of his recreations, he was never known to alter in quality the simplicity of his table, or to exceed in quantity his moderate allowance. He preserved a good appetite to the last, and was often heard to say, when eating a crust of stale bread, “ Oh how delicious it is ; it is so delicious that I am almost tempted to exceed my allowance,” but he was never known to do so. Thus his health and his intellect were preserved in a sound state till the latest period of his existence.

Numerous also are the instances of longevity, mostly in persons living in a state below mediocrity, who did not possess the means of obtaining *luxuries*.

Thomas Parr, a native of Shropshire . . .	died at	152
Henry Jenkins, a native of Yorkshire . . .	„	169
Peter Garden, a Scotchman	„	131
John Taylor, a Scotch miner	„	132
Sarah Rouen, a native of the directory of Carsaueber	„	164

John Rouen, her husband	died at	172
Petratsch Zorten, a native of Hungary, a cowherd	„	185
Lawrence, a native of Shetland	„	140
St. Mungo, bishop of Glasgow	„	185

Another instance of longevity in our own country is of that good and great man, the celebrated John Wesley, who, though naturally delicate and weak, endured great mental and bodily fatigue, by adhering to a regular system of diet and exercises, he died in 1791, 88 years of age. But it appears that in colder climates the examples are more numerous. In the year 1827 there died in Russia 947 persons above 100 years old; 202 above 110; 98 above 115; 52 above 120; 21 above 125; and 1 above 135.

Regularity in our pursuits is not only commendable, and will ensure a fortune, but is particularly advantageous to health. Rise early, go to bed early, divide and fix the periods for meals; with regard to dress, make no sudden changes, nor allow the allurements of fashion to decoy into indelicate or danger-

ous practices, among which latter I include the fatal habit of many females in this country who are sacrificed to *tight lacings**; of such cases I have had frequent opportunities of making *post mortem* examinations, and these have proved my previous opinion and conviction of their state, which, by a display of morbid appearances too shocking to relate, have demonstrated the impossibility of health with unnatural binding for a foolish display of

* Dr. Faust says, " Stays and stiff jackets are most pernicious ; they disfigure the beautiful and upright shape of a woman, and injure the breast and bowels ; obstruct the breathing and digestion ; hurt the breasts and nipples so much, that many mothers have been prevented by their use from suckling their children ; many hence get cancers, and at last lose both health and life—for they render the delivery of women very difficult and dangerous both to mother and child." It must be obvious, that it is the *improper construction* of stays that causes the pernicious effects described by the Doctor ; and the author feels pleasure in having this opportunity of publicly expressing his decided approbation of the "*Elastic Stays*," invented by Mrs. Mills, 231, Regent Street ; which afford sufficient support to the body without impeding any of the functions of either the respiratory or digestive organs, whilst they at the same time are well calculated to give grace and elegance to the figure.

figure *. I also warn from sitting in draughts of air, from all sudden or immoderate changes of heat or cold, and at the same time I recommend that the feet *be always* kept warm and dry.

Cleanliness, which is said to be next to godliness, is not only a luxury but a virtue, and is indispensably necessary to the preservation of health; and Dr. Buchan says "that some of the most dreadful diseases incident to human nature might, in his opinion, be entirely eradicated by cleanliness." It is, therefore, a happiness to live in a country where its advantages are so highly valued. I advise a regular period for daily external ablution; the best time is immediately on rising in the morning, which (by taking care to rub the body well dry with a coarse rough towel, and, when dried, with a good flesh-brush,) tends to open the pores of the

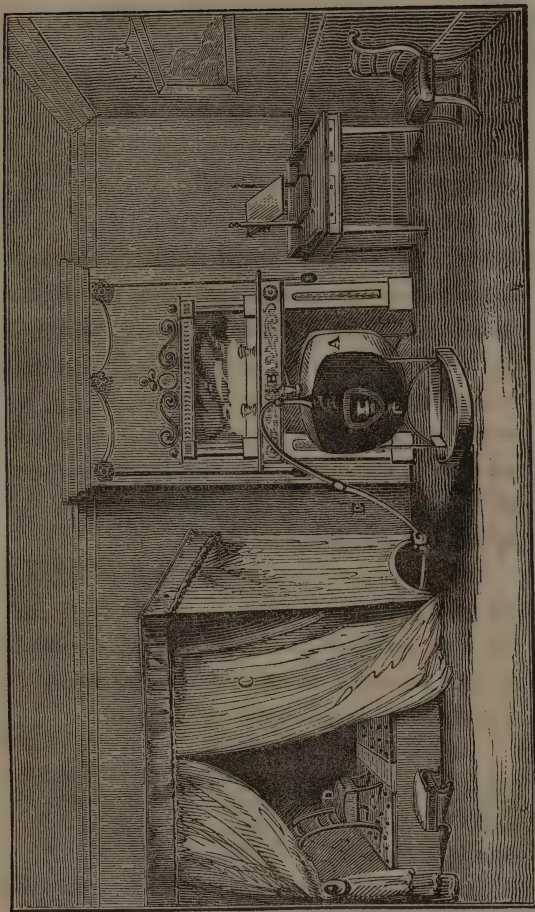
* Terence, in his comedy of the Eunuch, ridicules the matrons of Rome for endeavouring to mend the shape of their daughters.

skin, whereby nature is enabled to discharge any redundancy of acrid and hurtful juices.

“ Ev’n from the body’s purity, the mind
Receives a secret, sympathetic aid.”—THOMPSON.

Numerous also are the diseases which are either benefited or cured by means of *vapour baths*, particularly by those which are constructed on a plan calculated to suspend in their vapour the essential principles of various medicinal plants and herbs, whereby their effects may be conveyed into the circulation through the lungs; and I feel pleased in adding my testimony to the many before published of the great utility of this system of practice, which I have witnessed at Mr. W. Seaman’s Vapour-Bath Establishments, the origin of which see an account of at the end of this work.

VAPOUR BATH.



A, Furnace. B, Safety Valve. C, The Bath. D, Chair for Patient. E, Tube to convey the steam.

*A warm water bath** is frequently found to assist materially other remedies for the removal of disease, by its soothing effects on the internal organs, imparted to them in consequence of their great sympathy with the surface of the body, at the time of its immersion in the water, independently of the benefit received by the quantity of water, (imbibed by the absorbents,) acting as an internal fomentation, a fact that has been proved by experiments which have shown that the whole surface of the body will absorb from three and a half to four pounds of water in the space of ten minutes.

Let the *exercise* taken be sufficient to assist properly the concoction of the aliment, and the circulation of the blood, in both of which it is a material agent, but let it not be so violent as to cause excessive fatigue †.

* “ Fabricius affirms that the Romans were in nothing more ambitious than in their baths and stoves, for the preservation as well as recovery of the public health.”—*Medical Anecdotes*, by B. Dominiceti, M.D., 1781.

† For young persons, skipping with a rope is one of the

Be *temperate* and forget not that drunkenness lowers man beneath the beast ; it weakens the digestive organs, impairs the memory, enervates the whole frame, and not only ruins the health, but destroys all happiness, and is frequently followed by the worst evils. “ Wine is a mocker, strong drink is raging, and whosoever is deceived thereby is not wise ;” (Prov., chap. xx.)—and remember, that the oftener a building is shook, the sooner it will fall.

“ *Drunkenness* expels reason, drowns the memory, defaces beauty, diminishes strength, inflames the blood, causes external and incurable wounds, is a witch to the senses, a devil to the soul, a thief to the purse, the beggar’s companion, the wife’s woe, and the children’s sorrow ; makes a strong man weak, and a wise man a fool. He is worse than a beast, and is a self-murderer, who drinks

best in-door exercises, but it should be performed *backwards*, which extends and opens the chest, gives the lungs a freer action, and improves the figure.

to others' good health and robs himself of his own."

"For when the wine's quick force has pierc'd the brain,
And push'd the raging heat through every vein,
The members all grow dull, the reason weak,
Nor can the tongue its usual accents speak;
The eyeballs swim, the legs forget their gait,
And bend beneath the body's cumb'rous weight.
Unmanly quarrels and loud noise deface
The powers of reason, and usurp their place:
Oft times with vi'lent fits the patient falls,
As if with thunder struck, or foams and bawls,
Talksmadly, shakes, moves here and there, breathes short,
Extends and tires his limbs with antic sport;
While the rank venom, scattered through the whole,
Destroys the ablest functions of the soul."

It will be found from the register of the Society of Friends, or Quakers, that, as a consequence of their temperance, one half of those that are born alive, live to the age of 47 years; whereas Dr. Price tells us, that of the general population of London, half that are born live only $2\frac{3}{4}$ years! Among the Quakers, 1 in 10 arrives at 80 years of age; of the general population of London, only 1

in 100. Never did a more powerful argument support the practice of temperance and virtue.

Moderate all excess of passion, of whatever kind; excess in all things is prejudicial to health; endeavour to be calm under trials, contented with your lot in life, and cheerful in your disposition; under such regulations, the first of earthly happiness may be best attained—the enjoyment of health, and the reasonable prospect of a lengthened life.

“ Can a physician minister to a mind diseased,
Or pluck from memory a rooted evil.”

I shall now present my friends with a table intending to show how doses of medicine should be proportioned in weight to the age of the patient, fixing the largest dose at one dram, or 60 grains, for an adult of 21 years; and then offer a few examples of simple remedies, as being well calculated to assist the digestive organs, to act upon the bowels, to increase the tone of the *stomach*, to allay irritable coughs, and to promote

the secretion of the *liver*, &c.: and if I should have the happiness of hearing that any of my readers have derived benefit from the perusal of these observations and the adoption of my remedies, I shall be amply rewarded.

TABLE OF DOSES

PROPORTIONED TO THE AGE OF THE PATIENT.

Ages.	Doses, commencing for Infants 7 weeks old, and gradually increasing till 21 years, and then diminishing till 100 years. The dose for an Adult at 21 being taken at 1 dram.	Proportions.
Weeks 7	4 grains	$\frac{1}{15}$
Months 7	5 grains	$\frac{1}{12}$
14	$7\frac{1}{2}$ grains	$\frac{1}{8}$
28	12 grains	$\frac{1}{5}$
Years $3\frac{1}{2}$	15 grains	$\frac{1}{4}$
5	20 grains, or 1 scruple	$\frac{1}{3}$
7	30 grains, or $\frac{1}{2}$ a dram	$\frac{1}{2}$
14	40 grains, or 2 scruples	$\frac{2}{3}$
21	60 grains, or 1 dram, being the full dose	
63	55 grains	$\frac{11}{12}$
77	50 grains	$\frac{5}{6}$
100	40 grains, or 2 scruples	$\frac{2}{3}$

20 grains make one scruple, and 3 scruples one dram.

PURGATIVE PILLS.

LIX.

Take of Calomel 3 grains;
 Jalap 9 grains;
 Powdered ginger 1 grain.

Mix them together with a little simple syrup, divide the mass into three pills, and take them all at bed-time.

LX.

Take of Calomel 2 grains;
 Compound extract of colocynth . . 5 grains;
 Ginger powder 3 grains;
 Two or three drops of water.

Rub them up together, divide the mass into two or three pills, and take them at bed-time.

LXI.

Take of Blue pill 3 grains;
 Compound pills of gamboge . . 7 grains { fresh
 made.

Rub them together, divide the mass into two pills, and take them at bed-time.

Either of these preparations will be found useful in aid of the injections, Nos. III., V., VII., or VIII., either of which may be thrown up early on the following morning, should simple *Lavements* be found insufficient for the removal of costiveness; and they will be, as

occasional remedies, necessary in bilious affections, to stimulate the *liver* and increase the *peristaltic* action of the small intestines.

STIMULANTS.

LXII.

Take of Gum assafoetida 1 drachm;
 Powdered Jamaica ginger $\frac{1}{2}$ a drachm;
 Subcarbonate of ammonia $\frac{1}{2}$ a drachm;
 Syrup of saffron, a sufficient quantity.

Beat [them well together in a mortar, divide the mass into twenty-four pills, and take two three times a-day.

LXIII.

Take of Spirits of sal volatile $\frac{1}{2}$ a drachm;
 Compound tincture of cardamoms . 2 drachms;
 Simple syrup 2 drachms;
 Camphorated julap 10 drachms.

Mix them together, and take it as a draught three times a-day.

In cases of *palsy*, the last two will be found excellent remedies, at the same time that torpor of the bowels is removed by throwing up, night and morning, either of the injections, No. VIII., IX., X., XIII., or XIV., assisting their action by warm

baths, fomentations, and exercise. The frequent use of the flesh-brush will also be found most useful.

TONIC, STOMACHIC, AND APERIENT.

LXIV.

Take of Extract of gentian $\frac{1}{2}$ a drachm ;

Compound extract of colocynth . . . $\frac{1}{2}$ a drachm.

Mix them together, and divide the mass into twelve pills,
of which take two every morning.

LXV.

Take of Powdered Turkey rhubarb $\frac{1}{2}$ a drachm ;

Powdered Jamaica ginger $\frac{1}{2}$ a drachm ;

Extract of chamomile 1 drachm.

Mix them together, and divide into twenty-four pills, of
which take three daily before dinner.

In weakened digestion, impaired appetite, nausea, debility, languor, *fluor albus*, and retention of the menses, these will prove beneficial remedies, in conjunction with the simple injections, Nos. I., II., III., and IV., which will generally in these cases be sufficiently powerful to empty the bowels without the aid of more active medicines.

DIAPHORETICS.

LXVI.

Take of Dover's powder 9 grains;
 Powdered gum arabic 3 grains;
 Water, two or three drops to rub them together with
 Divide into three pills, and take them at bed-time.

LXVII.

Take of Syrup of white poppies 1 drachm;
 Tincture of digitalis 20 drops;
 Antimonial wine 20 drops;
 Camphorated julap, a wine-glassful.
 Mix them together as a draught, and take it at bed-time.

In troublesome, irritable coughs, either of the preceding may be taken advantageously. On the following morning inject one of the mild aperients, No. I., II., III., IV., V., VI., VII., or VIII., as the state of the bowels may require.

ALTERATIVES AND LAXATIVES.

LXVIII.

Take of Blue pill 24 grains.
 Divide it into twelve pills, and take one every night at bed-time.

LXIX.

Take of Blue pill 1 scruple;
 Powdered opium 4 grains;
 Mix them together, and divide the mass into twelve pills.

In cases where costiveness appears to depend entirely on a deficiency of *bile*, take one of the pills No. LXVIII. at bed-time, for a few nights; and should they appear to induce purging without imparting their action to the *liver*, then substitute No. LXIX. instead; and on the following mornings inject either of the enemata, No. I., II., III., IV., V., VI., VII., or VIII., as may appear best suited to rouse the action of the bowels.

LXX.

Take of Compound extract of colocynth . . 1 drachm;
 Ipecacuanha powder 10 grains;
 Castile soap 12 grains;
 Extract of hyoscyamus $\frac{1}{2}$ a drachm;
 Blue pill 1 scruple.
 Mix them intimately, and divide the mass into thirty pills;
 take two or three at bed-time, as an aperient in colds, or
 in a sluggish state of the bowels, and follow them by a
Lavement in the morning.

This pill is a most excellent remedy in all obstructions, and is perfectly safe and mild in its operation.

In order to increase the utility of this little volume, I shall proceed to add a few safe domestic remedies, in various complaints, external as well as internal.

LXXI.

Take of Extract of chamomile flowers . . . 1 drachm;
Sulphate of quinine 1 scruple;
Simple syrup, sufficient to form twenty pills.

Take one twice a day in weakness of the stomach, in agues, general debility, for the whites, and all complaints requiring tonics.

LXXII.

Take of Blue pill 1 scruple,
Compound extract of colocynth . . 2 scruples;
Extract of gentian 1 drachm;
Ipecacuanha powder 10 grains.

Mix, and divide into thirty pills: take two at bed-time on alternate nights, as an aperient.

LXXIII.

Take of Camphorated julep	2 ounces;
Almond emulsion	2 ounces;
Spirit of Mindererus	2½ ounces;
Sweet spirit of nitre	2 drachms;
Wine of ipecacuanha	2 drachms;
Tincture of henbane	1½ drachms.

Mix. Take one or two table-spoonsful for colds, coughs, fevers, and inflammatory affections, drinking freely of diluents and demulcents.

LXXIV.

Take of Good green tea	1 drachm;
Boiling water	½ a pint.

Infuse in the common way in a tea-pot, strain, and inject for the whites. Its sedative and astringent effects render it a valuable remedy in this complaint. See the chapter on female diseases.

LXXV.

Take of Pure water of ammonia	1 ounce;
Olive oil	3 ounces.

Mix.

For sprains, rub this liniment well into the part injured two or three times a day.

Also for *scald head*.

LXXXII.

Take a common blister of Spanish flies, made large enough to cover the head like a cap: apply this for twelve hours.

This last is a very painful, but frequently a certain, remedy for scald head.

LXXXIII.

Take blue vitriol finely powdered and put into a bag, which shake well all over the head twice a day; then cover it up with a cap of bladder.

The author has performed several cures by this means when all others have failed. The operator and the patient must each have handkerchiefs placed over the nose and mouth, to keep the dust out.

LXXXIV.

Take of Corrosive sublimate 1 scruple;
 Lime water $\frac{1}{2}$ a pint.
 Mix. Wash the head frequently with this lotion. Or,

LXXXV.

Take of Oxide of zinc 1 scruple;
 Fresh lard 1 ounce.
 Mix well.

Apply this night and morning for *scald head*. It is necessary to observe, that whatever application may be used in this disease, the head must be afterwards washed all over with warm water and soft soap, every morning before it is fresh dressed.

LXXXVI.

Take of Purified white vitriol 6 grains;
 Distilled water $\frac{1}{4}$ of a pint.

This collyrium, or wash, is beneficial in blood-shot or inflamed eyes: it should be used three or four times a day.

LXXXVII.

Take of Acetate of ammonia 1 ounce;
 Rose water 1 ounce.
 Mix.

This is the most useful application to inflamed eyes, where there is a high degree of irritation and pain, and will often succeed when other lotions have been ineffectually tried.

LXXXVIII.

Take of spirits of turpentine a small quantity, which place in a tea-cup, at a moderate distance before the fire to warm. I say a small quantity, because it will take fire if it comes in contact with this element.

Of all applications this may be most depended on, if very frequently applied, whilst warm, to chilblains.

LXXXIX.

Take of oil of cinnamon from four to six drops, on a piece of lump sugar, and suck slowly till dissolved and swallowed.

A certain cure for hiccough.

XC.

Take of Alum	2 drachms;
Barley water	1 quart;
Honey of roses	3 ounces.

This gargle is well calculated for ulcerations in the throat, gums, &c.; or relaxation of the palate of the mouth, or *uvula*.

XCI.

Take of Alum powdered 6 grains;

Rose water 4 ounces.

Mix.

A useful injection for the *whites*. See the chapter on diseases of females.

XCII.

Take of Lime water and linseed oil equal parts, and shake well together.

This will be found a useful domestic remedy in scalds and burns; to be applied constantly by pieces of linen rag dipped in it, having, for the first six or eight hours after the accident, dressed them with hot spirits of turpentine.

XCIII.

Take of common salt any quantity, on which pour only sufficient water to moisten it, or make it into a thick brine.

A table-spoonful of the above on cloth, constantly applied, will be found the best possible application to the glandular swell-

ings to which children are subject at the side of the neck and under the ears, and will generally prevent their breaking and forming an ugly scar.

XCIV.

Take of Linseed meal 2 ounces ;
Sweet oil 1 table-spoonful ;
Warm water a sufficient quantity.
Mix well for a poultice.

This will be found the best that can be used in common cases, in order to encourage the suppuration of an abscess, as it keeps *moist* a long time, which is the principal use of a poultice. Avoid the old custom of mixing poultices with milk, particularly for broken surfaces, as when thus made they are liable to turn sour by the heat of the part, and do not possess a greater property of relaxing the skin than those made with water.

XCV.

Take of Carrots any quantity, boil them till soft, then mash them.

This will be found a useful poultice to foul ulcers, and is well calculated to restore them to a healthy appearance.

XCVI.

Take of White wax $\frac{1}{2}$ an ounce ;
 Oil of sweet almonds 1 ounce ;
 Honey $\frac{1}{2}$ an ounce ;
 Balsam of Peru 2 drachms.

Melt the first three articles in a gallipot before the fire, in a gradual manner, and stir in the balsam of Peru.

In cracked or sore nipples this is an invaluable remedy.

XCVII.

Take of Liquor of potass 20 drops ;
 Water, a wine-glassful.
 Mix.

XCVIII.

Take of Prepared chalk $\frac{1}{2}$ a drachm ;
 Water, a wine-glassful.
 Mix.

Either of the above prescriptions will be found useful for relieving *Heartburn*, but

as this is a symptom of *Indigestion*, its entire cure must depend on the various means before recommended in the body of this work.

XCIX.

Take of Fresh hog's lard, washed from the salt . . 1 ounce ;
 Liquid extract of Goulard 10 drops.
 Rub them with an ivory paper-knife on a marble slab till they
 are well blended.

This is the most useful application for excoriations, and is also the best remedy for the cure of that unhealthy state of the flesh sometimes produced by the irritation of a blister.

C.

Take of Purified nitre 2 drachms ;
 Barley water 7 ounces ;
 Acetate of roses 7 drachms.
 Mix. To be used frequently.

This is a useful gargle for an inflamed throat.

CHAPTER XI.

PARTICULAR DIRECTIONS RESPECTING THE CHOICE OF LAVEMENT APPARATUSES; WITH A DESCRIPTION OF THE CONSTRUCTION OF THOSE RECOMMENDED BY THE AUTHOR, AND OF THE MODE OF USING THEM, ETC.

THERE are several varieties of injecting *syringes* modelled according to the taste or convenience of each manufacturer; some with ball-valves, some with plate-valves, others with stop-cocks; whilst some depend on turning the piston at each time of withdrawing it: they are also composed of various metals, and I shall, therefore, make some few observations essential for the observance of those who are desirous of being provided with the most effectual, and, in all respects, the best.

Injecting instruments with ball-valves have been represented as recent inventions: but this is not the case. In the splendid work

on instruments, published in 1798 by Mr. Savigny, will be found a plate exhibiting the ball or spherical valve, adopted by Mr. Earle for an injecting apparatus, from which I have copied the following paragraph:—

“The apparatus of Mr. Earle for injecting in hydrocele, consists of an elastic bottle-syringe, containing about four ounces, with a brass mounting, to which is attached a hollow cylinder *with a small ivory ball*, acting as a valve or stop-cock, to prevent the return of the injected fluids, when it may be necessary to detach the bottle for the purpose of repletion. This contrivance is simple, and answers the intention infinitely better than the stop-cock, which requires too much of the operator’s attention to its management; while this, from the nature of its construction, acquires a principle of self-action that needs not any.”

I am also indebted to that able engineer, the late Mr. Maudsley, for the ready access he gave me to his valuable library, and the instances he produced of the antiquity of

the ball-valve, plates of which appeared as early as the year 1588, being 242 years since. How much earlier than this they may have been in use, I cannot determine. So much for the novelty of spherical valves !

I am still farther indebted to this gentleman for the following interesting letter from another learned and able engineer, Mr. Farey, which, with the sketch of the ball-valve to which it relates, I beg here to introduce.

37, Howland Street, Fitzroy Square.

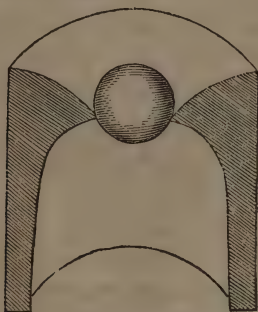
DEAR SIR,—I have searched my copy of Leupold, to find the ball-valve, and send you a tracing of it from No. XII. of Table 27 of his “*Machinarium Hydraulicum*,” vol. i. p. 96. It does not appear to have been a favourite with the author, who states a string of objections: 1st, That it will be very expensive; 2d, That only one in a hundred can make such a ball true; 3d, That the weight of the ball will retard the passage of the water; 4th, That mud and sand will destroy the fitting of the ball, and

hence it will not do for fire-extinguishing engines; 5th, That it had been proposed to make the ball of wood; but that would not do at all, because it would be too light in the water, and too soft, so that it would soon wear out. He afterwards says that the ball-valve leaves the passage for the water more open than spindle-valves. I suppose you have seen the French plan of spherical valves, made of hard porcelain (like Wedgewood's ware), *ground spherical*, and fitted to *brass syringes*.

Your's, truly,

JOHN FAREY.

Henry Maudsley, Esq.



Mr. Farey's Sketch.

Syringes made with *ball-valves* are not only objectionable for *Lavements*, but are particularly *unfitted for the purpose of a stomach-pump**, as in cases where the operator happens to be shorter in stature than the patient, the syringe would not act at all; or rather, if the syringe be placed horizontally, which would then be the case, the balls would roll away from the orifice they are intended to stop up, and the operator (perhaps not a very good mechanic) would be baffled in his intention, and might lose his patient. And again, if he should not clearly understand the internal construction of the instrument, he might possibly hold it in such a position, that the branch outlet at the side being turned sideways, or undermost instead of uppermost, the ball would also recede from the aperture, and the instrument be rendered ineffectual. It would be better if *such* instru-

* The Author would *caution* his professional brethren not to trust^{to} Stomach-Pumps that have *valves*, they frequently become obstructed by *indigested* food !!

ments were to be fitted with *conical valves*, and that those intended for *stomach-pumps* should have a spring to keep the cone in its situation, that the instrument might be effective in whatever position it was held ; so that the apothecary's apprentice might use it with as much ease as his more experienced master. But in order to obviate completely these difficulties, there should be *no valve* at all, particularly in a *stomach-pump*, as I have known several cases where life *has been* sacrificed from portions of undigested food stopping up the valves, and frustrating the intentions of the operator. An *improvement* upon my *original pump*, which was fitted with two stop-cocks, and without valves, has been lately shewn to me by an ingenious young man of the name of Fuller ; it consists in having affixed to the *cock*, a *lever*, by which the cock is turned at pleasure by the thumb of the *left hand* that grasps the cylinder or body of the syringe. This young man submitted to the operation of having his *stomach*

emptied with one of these, and I was much gratified on the occasion with the improvement made in the instrument.

INSTRUCTIONS FOR CHOOSING LAVEMENT
APPARATUSES.

HAVING inspected the construction of numerous instruments manufactured for using *Lavements*, I would recommend that persons who possess them (if they are made of brass) should be very careful to keep them clean inside, as I have known them to corrode, and, indeed, have one now in my possession, beautifully made in appearance, but which is corroded on the inside, and covered with *verdigris*, notwithstanding it has had a *wash* of tin on its surface; but as this is only a *wash*, it is liable to wear off by the friction of the piston. I am, however, happy to say, that the newly constructed syringe is made of a safer composition, namely, of pewter and antimony; and so combined, as to be better adapted for instruments of this description than any

other metal, silver excepted : they possess the advantage of being always free from hurtful collections forming on the internal surface, and may be purchased for less than half the price of the brass instruments.

Lavement instruments are not only hurtful when made of metals likely to corrode, (particularly if they are employed in female complaints,) but are more liable to get out of order. Besides this, they should be perfect as regards the mechanical principles on which they are constructed. Some that I have seen are fitted with two leaden balls, which are called spherical valves; which I think very objectionable, as engineers agree in the great difficulty of making a perfect sphere. Such instruments, made much larger, might do for the common purposes of watering gardens, or laying the dust in the roads; and are very ingenious and pretty, though a *very ancient* invention.

A better instrument, on the principles now under consideration, for the purposes of administering injections, is fitted with valves

of a conical figure, the *flat end* of which being wider than the orifice it covers, and both it and the *plate* in which the orifice is made being perfect planes, no air can rush in; and they are so simple, that nothing but the roughest usage can in any way injure them. This instrument I have called

THE IMPROVED LAVEMENT APPARATUS.

It possesses also, in addition to the above, this great advantage, that it can be used in any position of the body; whilst the one before alluded to must be held in a particular manner, or at an angle of forty-five degrees, which renders it extremely inconvenient in its application, and harassing to the patient. The improved syringe will answer well for the administration of Lavements; but for a stomach-pump, I should prefer, for my own use, the one before alluded to, shown to me by Mr. Fuller.

Directions for using the Improved Lavement Apparatus. (See Plate, page 148.)

First, Screw the end of the flexible tube to the opening at the side of the syringe D, and at the other end of the tube E fix the angular ivory pipe in a perpendicular position.

Secondly, Place a large wash-hand basin, containing the fluid intended for injection, on a stool about three or four inches lower than the chair on which you intend to sit, and draw the stool to a convenient distance towards you, between your legs; then put the lower end of the syringe C into the fluid to the bottom of the basin, and keep it there in an erect position, holding it at B by the left hand, whilst the right hand has hold of the top of the piston A: the patient sitting on the chair, with the ivory pipe already introduced, is then to commence injecting, by slowly moving the piston up and down; when the contents will be pumped or thrown into the intestines. After a

few strokes with the piston, the action may be increased or diminished, as best suits the convenience of the patient.

If any other fluid than warm water is used, the instrument should be well washed out afterwards; and if, by long use, the piston should become loose, or shrink, it may be remedied by winding a little fine worsted evenly round it under the leather, and it will be as good as new.

A straight ivory enema pipe is provided, for persons who wish a nurse or other person to administer the injection for them; and also another for uterine diseases.



This Engraving is intended to represent the CLYSMA-DUCT, hanging in a convenient situation for use, with the Water flowing.

DESCRIPTION OF THE FLEXIBLE CLYSMA-DUCT,
OR CLYSOIR, AS IMPROVED BY THE AUTHOR,
AND OF THE MANNER OF USING IT.

HAVING mentioned the different *Lavement syringes* that have been introduced to the public, and also the manner of using them, I shall now proceed to a particular recommendation of a more simple instrument which has been lately presented to me (constructed by the French), and which I have considerably improved : it consists of a bag or hose, composed of a water-proof substance ; and is from four to six feet in length, and at the top, or opening into it, about four inches in diameter, gradually and regularly decreasing in size to the lower extremity or outlet, which is not more than three-eighths of an inch in diameter, and is here provided with a stop-cock*, to which is screwed a metallic tube, the other end of which is

* The original instrument that came from France was so small as to be generally ineffectual ; and so inconvenient for

adapted for introduction, as will be seen in the Plates. (See page 151 and 281.)

With this simple and cheap instrument every purpose sought for by this method of medical practice may be accomplished, and with the most easy and comfortable feeling to the patient,—its force being equal, and its pressure more uniform than in any other apparatus I have ever seen for similar purposes: it is to be used in the following manner:—

Having first observed that the stop-cock at the bottom is turned, so as to prevent the escape of the fluid, you pour in at the upper end of the hose the fluid intended for injection, *first brought to its proper temperature*; and when it is filled within five or six inches of the top, you are to hang it up by the loop, to a hook in the wall of your

the want of the stop-cock and metallic tube, that unless the author had greatly improved it, it would never have attained the high character for superiority from the leading members of the profession with which it is now honoured. See signatures at the end of this book.

dressing-room or water-closet, so high that the lower end of the metallic tube will just reach to within one inch of the floor, then place a chair at such a convenient distance as will enable you to lay the tube on its bottom, when you may sit down, and having introduced it, you have both hands free. You then turn the cock with one hand, whilst with the other (if additional force is required to overcome obstinate cases) you are gently to grasp the hose at about one-third of its distance up, and drawing the hand down towards the small extremity, force or propel onwards the fluid : and repeat this frequently ; which, together with the natural inclination of fluids to attain their level, will prove sufficiently strong to overcome any difficulties that may occur. In an experiment which I had an opportunity of making with this apparatus, I was enabled, by refilling it, to throw up fourteen pints of water, which proves its very great capability. But in ordinary cases, where *Lave-ments* are resorted to merely to assist, in a

gentle manner, the daily evacuations, and are not employed to overcome difficult diseases, *no pressure* from the hand is required, nor need it be hung upon a hook, but merely held high up by one hand, as the mere weight of the water is sufficient to accomplish the intention. The quantity of fluid contained in instruments of this kind is from one to two quarts; and should more than this be required, it can be replenished. This most useful and delicate* little apparatus, which is contained in a small mahogany case, with lock and key, is so compact that it can be put into the coat-pocket; and is manufactured and sold, together with every other kind of apparatus for injections, by Mr. Harcourt, 12, Carlton Street, Regent Street, two doors from Waterloo Place.

Those which are used in France are fitted

* The use of syringes or pumps for female purposes appears extremely indelicate, besides which the labour of working the piston up and down is particularly harassing and fatiguing for a weak person!! The Clyisma-duct is in all respects a superior apparatus.

without a stop-cock, which is supplied by merely twisting the lower end of the hose; but I consider the addition of a stop-cock, and the substitution of a tube, a considerable improvement, by preventing the possibility of the escape of the fluid, which would be obviously unpleasant.

CHAPTER XII.

ON CORPULENCY.

FAT, when moderately diffused over the body, indicates a sound state of health, and an easy disposition, gives a symmetry to the figure, and (which by many is valued more than all these,) it contributes much to the beauty of the countenance; but on the contrary, where it accumulates to excess, it becomes an *absolute disease*, and is frequently the *cause of death*, particularly in habits where some chronic disorder has preceded it, or where acute attacks of disease have been aggravated by its presence. An abundant quantity of fat is distributed generally through the frame in so universal a manner as to cause all parts to increase in a uniform and proportionate degree, whilst in other instances its growth appears to

be of a partial nature; and persons may be observed to have an enlarged *abdomen*, or to become excessively thick or fat about the *chest* and *neck*, and to complain frequently of a sense of suffocation.

That *abdominal* enlargement which is frequently observed to commence in persons of both sexes, at about thirty-five or forty years of age, is caused by an excessive accumulation of fat about the *kidneys*, *omentum**, and *mesentery*†, and frequently produces the greatest distress, as it presses against the *diaphragm*, retards its respiratory motion, and renders breathing exceedingly difficult and laborious; besides which the action of the *heart* becomes impeded from the same cause, and the large blood-vessels immediately connected with it being at the same time pressed upon, the circulation is re-

* The *Omentum*, is a membrane that covers the *Intestines*, which being naturally disposed to fat, serves to lubricate them and to prevent friction!

† The *Mesentery*, is a membrane attached to, and intended to sustain the *Intestines*, and keep them from becoming entangled!

tarded, and ther is in consequence an *unequal* distribution of blood through the system.

In addition to these effects, the compression that takes place on some of the principal *nerves*, combines to lay the foundation of disorders of the most disastrous kind.

To an efficient remedy, or system of cure for this disease, the author's attention has been for some years directed, and, he is happy to add, not without most decided and satisfactory benefit in numerous instances, but more particularly in those where a state of obesity has led to a derangement of the functions of the organs more *immediately connected with digestion*, as is universally the case where the principal accumulation of fat is about the *kidneys*, &c., as already described.

It is sometimes difficult to trace the immediate cause of corpulency, but in some habits it appears to arise from a peculiarity of constitution predisposing to this state, whilst in others it is occasioned by indulging

in the use of highly nutritious food, in drinking freely of malt liquors, living a quiet and indolent life, sleeping much, *and neglecting the state of the digestive organs.*

Obesity is a disease of an alarming nature, but which, from the imperceptible and gradual manner in which it advances, is seldom attended to until it becomes extremely dangerous, and then the patient begins to think of pursuing *some means* for effecting its cure.

These must necessarily depend much on the exertion and will of the patient, who should pay strict attention to his diet, exercise, sleep, or medicines, directed by a skilful medical man, who, having made the treatment of this disease more an object of his particular interest than is usually required as a portion of medical education, is well able to adapt proper remedies, suited to the various circumstances attendant on each individual case.

It would be impossible *here*, to describe *any system* on which reliance could uniformly

be placed for the cure of this complaint, as most cases that have come under the author's observation, have been characterized by various symptoms, causes, and effects, and have generally required such a diversity or modification of the principal remedies necessary to the cure, as to defy all attempt at prescribed *rules* or particular directions; but as a *general* law, the patient should reduce the usual quantity of his food, drink sparingly, avoid malt liquors, rise early in the morning, abstain from suppers, sleep little, use exertion, encourage perspiration, and compress the abdomen by means of *proper stays* or belts, that will not impede respiration, and that are otherwise suitable for these purposes; but, above all things, he should pay strict attention to the state of the bowels *and digestive organs in general*; and never neglect applying for medical assistance, if they should become disordered.

The effects of corpulency are of course observable by an increase of size, and, as the disease advances, by a general state of stupor,

insensibility, and somnolency, with a fulness of the vessels of the neck, a disposition to apoplexy, and death.

It is a mistaken idea to suppose that corpulency cannot be obviated, and is encouraged by those professional men only, who *have not* devoted their time and abilities to the investigation of this necessary branch of medical knowledge. The jockey-ship at Newmarket, Epsom, and other places where men have been reduced (without injury to their health) 20 pounds in weight in less than a month, is a well known fact, that rises in judgment against such a belief; and the author has no hesitation in assuring persons thus afflicted, that by a strict observance of the *proper means*, for *a sufficient period of time*, the most corpulent man or woman may be reduced to their natural size, whilst, at the same time, their general health shall be materially benefited by the necessary means used for the purpose.

Pills of *Castile soap*, to the number of eight or ten in the twenty-four hours, with

diuretics and *alkaline waters*, have sometimes been found useful *domestic* remedies; but the foolish prevailing habit of attempting to cure obesity by draughts of vinegar, or lemon juice, has frequently led to irreparable and fatal consequences.

My professional avocations, and great increase of practice in the treatment of diseases dependent upon *indigestion*, have prevented my completing a work upon the Nature, Causes, Prevention, and Cure of Corpulency, and it is not compatible with the nature and limits of *this* book to enlarge on it here, but it shall be published at my earliest convenience.

One word more, at parting with my readers:—Keep in mind the danger that attends *delay* in the *treatment of disease*; for it is always more rapid in its increase, than in its cure, even under the most favourable circumstances and skilful practice.

ALPHABETICAL VIEW OF THE DISEASES

IN WHICH THE DIFFERENT KINDS OF

INJECTIONS

RECOMMENDED IN THE WORK MAY BE USED;

AS WELL AS

MANY USEFUL FAMILY PREPARATIONS OF MEDICINE.

N. B. The Number indicates the particular Injection and Preparation which should be employed or taken.

	No.
Agues, Pills for	71
Alterative Pills	68, 69
Aperient Pills	64, 65, 72
Apoplexy	7, 8, 9, 10, 11, 12
Ascarides, or Worms	11, 23, 24, 25
Ardor Urinæ, or Scalding of the Urine	29
Abscess, Poultice for	94
Abortions	34
Acid Eructations	11
Burns, or Scalds, Liniment for	92

	No.
Bearing down of the Womb	52, 53, 54
Blisters, dressing for	99
Constipation	1, 2, 3, 4, 5, 6
Constipation with hardened Stools	9, 10, 11, 12
Cholera Morbus	26, 27, 28, 37, 38, 39, 40, 41
Colic	5, 6, 7, 8, 10, 11, 12, 18
Calculous Concretions in their Passage through the Ureters	29
Convulsions	27
Convulsions, Puerperal	16
Catarrh, or Colds	1, 2, 3, 4
Costiveness, Pills for	59, 60, 61
Coughs, Pills for	66
Ditto, Draught for	67
Colds and Coughs, Mixture for	73
Chilblains, Application for	88
Cynanche, or Sore Throat	41
Convulsions of Infants	14
Debility, Pills for	64, 65, 71
Diarrhœa, chronic	17, 19
Diarrhœa	38
Difficulty of passing the Urine	30
Diaphoretics	66, 67
Dressing for Blisters	99
Erysipelas	1, 2, 3, 4, 6
Excoriations, dressing for	99
Emetic Draught	78
Eyes, Bloodshot	86
Eyes, Inflammation and pain of	86, 87

	No.
Flatulence	5
Flux	4, 6, 37, 39, 40
Fluor Albus, or Whites	17 to 20, 52 to 56
Fluor Albus, or Whites, Pills for	64, 65
Fever, inflammatory	1, 2 3, 4, 42
Flooding	17, 18
Gripes of Infants	27
Gout	1, 2, 3, 4, 5, 6
Goulard Water	76
Gravel	26, 28, 30
Gums, sore	90
Gonorrhœal Inflammation	29
Glandular Swellings, Application for	93
Hysteria	13, 14, 15, 16
Hæmorrhage (omitting the oil and salts)	28
Hiccough, Drops for	89
Heart-burn	97, 98
Hernia	28
Hæmorrhage from the Womb	49, 50, 51
Inflammation of the Bowels	1, 2, 3, 4, 5, 6, 7, 8
————— Kidneys	9, 12
————— Stomach	2, 3, 4, 6
————— Bladder	4, 6
————— Uterus	29
————— Brain	10, 11
————— Lungs	1, 2, 3, 4, 6
————— Liver	1, 2, 3, 4, 5, 6, 7, 8
Inflamed Surfaces, Lotion for	76
Intoxication	10, 11, 12

	No.
Impaired Appetite, Pills for	64, 65
Inflammatory Affections, Mixture for	73
Languor, Pills for	64, 65
Laxative Pills	86
Linctus for Thrush	77
Measles	1, 2, 3, 4, 6
Menses, suppression of	36, 45, 46, 47, 48
Menstruation, painful	29, 47, 48
Malignant Sore Throat	42
Nipples, sore	96
Nausea, Pills for	64, 65
Obstructions, Pills for	70
Ointment for Piles	79
Painters' Colic	5, 6, 7, 8, 10, 11, 12, 26, 28
Prostate Gland, disease of	29
Piles	17, 18, 19, 20
Ditto, Ointment for	79
Pregnancy	1, 2, 3, 4
Poisons	10, 11, 12, 37, 38, 39, 40, 41
Either of the five last frequently repeated.	
Purgative Pills	59, 60, 61
Palsy	62, 63
Palate of the Mouth relaxed	90
Poultices	94, 95
Painful Indisposition, Pills for	94
Ditto ditto Lavement for	95, 96, 97, 98
Painful Indisposition	29, 47, 48
Rheumatism	1, 2, 3, 4, 5, 6
Retention of Urine	30

	No.
Rectum, irritation of	29
Rectum protruded	18, 20

If with bleeding, half the strength, and lukewarm.

Retention of the Menses	45, 46, 47, 48
Retention of the Menses, Pills for	[43, 44, 64, 65
Stranguary	30
Scalding of Urine	29
Stone	26, 28, 30
Strangulated Hernia	31
Stimulant Pills	62
Small Pox	1, 2, 3, 4, 6
Stimulant Draught	63
Suppression of the Menses	36, 45, 46, 47, 48
Sprains, Liniment for	75
Scarlatina	1, 2, 3, 4, 6
Stomachic Pills	64, 65
Suspended Animation	35
Scald Head, Applications for	80, 81, 82, 83, 84, 85
Stricture of the Œsophagus	42
Scalds, or Burns, Liniment for	92
Tenesmus, or bearing down	26, 30

Omitting the camphor.

Thrush, Linctus for	77
Tonic Pills	64, 65
Tetanus	13

Half the quantity two or three times a day.

Ulcers, Poultices for	95
Ulcerated Sore Throat	42
Ditto ditto ditto, Gargle for	90

	No.
Uterus, diseases of	29
Injected into the vagina.	
Urethra, diseases of	29
Vomiting	41
Vagina, diseases of	29
Injected into the vagina.	
Weak Stomach	42
Worms in the Stomach and small Intestines	12
Worms in the large Intestines	11, 23, 24
Whites 17, 18, 19, 20, 52, 53, 54, 55, 56	
Womb, diseases about the neck of	57, 58
Weakened Digestion, Pills for	64, 65
Whites, or Fluor Albus, Pills for	54, 65, 71
Whites, Injection for	74, 91
Weakness of the Stomach, Pills for	71

THE END.

Books apparently to be
had at Mr. W. Pine, Superintendent
at the Family Dispensary No 38
Strand, then come from the other side



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